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ENVIRONMENTAL ANALYSIS RECORD FOR THE

INTERIM CRITICAL MANAGEMENT PROGRAM

For Recreation Vehicle Use On The California Desert

November 1, 1973

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA DESERT STAFF

ENVIRONMENTAL ANALYSIS RECORD

Interim Critical Management Program

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I. DESCRIPTION OF THE PROPOSED ACTION

A. PROPOSED PROGRAM

The proposed action is implementation of an Interim Critical Management Program for Recreational Vehicle Use in the California Desert. The program implements, on an emergency basis, the findings of an intensive planning effort conducted between April and November 1973. The Program is designed to provide emergency protection of the California Desert's resources and environmental values, protect public health, safety and comfort, and allow continued recreation use of the desert pending completion and adoption of the final recreation vehicle use plan. Monitoring and study of the effects of recreation vehicle use will be carried out to provide input into the final plan and re-evaluation of environmental impacts contained in this Environmental Analysis Record. The elements of the program include:

1. Designation. The program includes identification of areas as either open, restricted to existing roads and trails, restricted to designated roads and trails, closed, and special design. These designations do not apply to private and state owned lands.

a. Open. Recreation vehicle travel is permitted anywhere in the area without restriction except that the vehicle shall be operated in a responsible manner in accordance with current regulations. The following areas are included in this category:

Area Number	Area Name
4	Olancha
8	Dove Springs
11	Rand Mountain/Spangler Hills
18	Dumont Dunes Northwest
30	Upper Johnson Valley
37	Cadiz Valley/Danby Lake
45	Ford Dry Lake
46	McCoy Valley
47	Little Chuckwalla Mountains
49	Chiriaco Summit
60	Plaster City
65	Mammoth Wash
68	Glamis/Imperial Sand Dunes (South)
70	Buttercup Valley

b. Restricted to Existing Roads and Trails. Recreation vehicle travel is permitted only on existing roads and trails, defined as public ways habitually travelled by vehicles, which may or may not be maintained by government, and which are clearly visible and have evidence of previous use. (It is understood that nature sometimes eliminates this evidence in washes. This event should not be construed as eliminating vehicular use under this designation.) The following areas are included in this category:

Area Number	Area Name
14	Red Mountain/Cuddeback
15	Fremont Peak
--	All national resource land not otherwise designated

c. Restricted to Designated Roads and Trails. Recreation vehicular travel is permitted only upon those roads and trails designated for use by the Bureau. Until designation is accomplished, vehicular travel is limited to existing roads and trails. The following areas are included in this category:

Area Number	Area Name
3	Saline-Panamint
6	Walker Pass/El Paso
7	Lone Tree Canyon
12	Randsburg/Johannesburg
13	Trona Pinnacles
16	Calico/Coyote Lake
20	Kingston Mountains
23	Eastern Mojave
35	Turtle Mountains Perimeter
36	Old Woman Mountains
39	East Morongo
40	Whitewater
41	Bighorn
42	Grapevine
48	Big Chuckwalla Mountains
50	Orocopia Foothills
55	Santa Rosa Mountains
59	Coyote Mountain
61	Yuha Basin
71	Picacho

d. Closed. Recreation vehicle travel is prohibited. (Access by means other than motorized vehicles is permitted.) The following areas are included in this category:

Area Number	Area Name
2	North Saline Valley
5	Darwin Falls
10	Tortoise Preserve
17	Amargosa Canyon
22	Clark Mountain
24	Kelso Dunes
31	Bigelow Cholla
33	Whipple Mountains
34	Turtle Mountains Interior
43	Desert Lily
51	Orocopia Mountains

Area Number	Area Name
53	Meca Hills Interior
54	Salt Creek
57	San Sebastian Marsh
63	Crucifixion Thorn
66	Glamis/Imperial Sand Dunes (North)

e. Special Design. A detailed plan will be prepared in cooperation with other governmental agencies and public interest groups to provide for a variety of vehicle use, together with related recreational facilities such as camping areas, use boundaries and access roads. Until such plan is completed and adopted, recreation vehicle use is permitted only on existing roads and trails. Areas that fall within this category include:

Area Number	Area Name
1	Eureka Dunes
9	Jawbone Canyon
19	Dumont Dunes
21	Ivanpah Valley
25	Mojave Basin
26	El Mirage Lake
27	Shadow Mountains
28	Kramer Hills/Iron Mountain
29	Stoddard Valley
32	Needles
38	Dale District
44	Palen Dry Lake
52	Mecca Foothills
56	San Felipe/Superstition Hills
58	Navy Lease
62	Davies Valley
64	Pinto Wash
67	East Mesa
69	Plank Road

2. Enforcement. The program includes an identification of areas where the plan will receive full enforcement effort. Additional areas will receive full management and enforcement as BLM capabilities are developed. The cooperation of desert users in following the plan and treating the environment responsibly will be needed if the plan is to be effective in providing protection to the desert. Areas selected for enforcement priority include:

Area Number	Area Name
1	Eureka Dunes
2	North Saline Valley
5	Darwin Falls
6	Walker Pass/El Paso
10	Tortoise Preserve
17	Amargosa Canyon

Area Number	Area Name
18	Dumont Dunes Northwest
27	Shadow Mountains
28	Kramer Hills/Iron Mountain
42	Grapevine
53	Mecca Hills Interior
66	Glamis/Imperial Sand Dunes (North)

3. Competitive Events. Competitive events are considered in the plan in the following categories.

a. BLM System. In these areas, organized competitive events will be allowed only in designated areas on designated competitive event courses. Use will be subject to Bureau requirements and administrative procedures except that enduro events will be considered under existing regulations in areas designated "open," "existing roads and trails" and "special design." Areas in this category include:

Area Number	Area Name
4	Olancha
14	Red Mountain/Cuddeback
15	Fremont Peak
21	Ivanpah Valley
25	Mojave Basin
27	Shadow Mountains
28	Kramer Hills/Iron Mountain
37	Cadiz Valley/Danby Lake
45	Ford Dry Lake
60	Plaster City
68	Glamis/Imperial Sand Hills (South)

b. Sponsor Option. In these areas, courses may be designed by the event's sponsor in accordance with the Bureau's requirements and administrative procedures. Areas included in this category are:

Area Number	Area Name
11	Rand Mountains/Spangler Hills (2 areas)
30	Upper Johnson Valley

c. Competitive Event Provisions. The program has made special provisions for vehicular competitive events under a number of management controls.

Nineteen areas are identified in which a system of race courses will be planned to accommodate the various types of competitive events traditionally held throughout the desert. These include cross-country, hare & hound, hare scrambles, european scrambles, poker runs and 4x4 loops. Two additional competitive events will be permitted on courses to be selected

and planned by the sponsors of such events. Supplemental environmental analysis will be required for completion of a system of courses as well as for the approval of the courses proposed by sponsors. Procedures for issuing Special Land Use Permits on such courses for such events have been established and will continue as a part of this program.

B. PURPOSE

The purpose of this program is to provide immediate management of recreational vehicle use. The objections are to protect the desert's environmental and resource values, and safeguard public health, safety and comfort, while allowing continued recreation vehicle use in areas that provide a deesirable recreation experience. Executive Order 11644, issued on February 8, 1972, establishes a unified federal policy toward the use of recreation vehicles on public lands. These objectives are incorporated into regulations issued by the Secretary of the Interior (43 CFR 6000 et. seq.) and form the basis for Bureau of Land Management actions in the California Desert.

The serious and immediate threat to desert resources and public safety, posed by accelerating recreation vehicle use, mandates emergency action. To await adoption of a final plan would invite irreversible destruction of desert values. An interim program is also necessary to allow monitoring and continuing study of recreation vehicle impacts before adoption of the final plan.

C. ALTERNATIVES

Alternatives are considered at two levels. First, there are several conceptual alternatives to the proposed plan. Selection of one of these alternative concepts establishes the framework for plan implementation. Secondly, for each area designated, four options exist - open, restricted to existing roads and trails, restricted to designated roads and trails, and closed.

1. Assumptions. In developing the plan, a set of alternative program concepts was developed to clarify program objectives and place anticipated consequences of various management directions in clearer focus.

a. Each alternative concept would have a different effect upon the enjoyment of recreation vehicle use.

b. Each alternative would have a different effect upon the protection of resources and other desert uses. The effects of each on the resources and other uses are discussed in Section III.

c. Each alternative would have different consequences with respect to Bureau management capabilities.

d. Each alternative differs in its effect upon future planning, or the preservation of planning options.

2. Alternative Program Concepts. Almost an infinite number of possible combinations of the four basic designation alternatives are possible. The following include the range of possible alternative program concepts.

a. All Open. Recreation activity would be allowed on all public lands. Management requirements would be minimal and planning options would be reduced.

b. All Restricted. Vehicles would be allowed only on existing or designated roads and trails and would, in effect, close areas where roads and trails are not fully defined because of surface conditions (e.g., sand dunes, dry lake beds, drainage courses). Competitive events would be restricted to designated courses and many current activities of recreation vehicle users would be prohibited, management requirements would be great, and future planning options would be maintained.

c. All Closed. This alternative would prohibit vehicular travel on all public land except highways and other roads maintained by government. This would require a high level of enforcement capabilities and would maintain future planning options.

D. PROCESS

The program is the result of an intensified planning effort conducted over the past seven months. It is the latest step in a planning process that began in 1968. Steps in the process included information and data gathering, analysis and evaluation, and design and designation of open, closed, and restricted areas (Figure 1). Recreation and resource data were brought together from a variety of sources including Bureau files, universities, colleges, representatives of the recreation vehicle industry, resource experts and organizations representing a broad spectrum of interests in the desert. Public review and input was obtained through numerous meetings with representatives of various groups and a series of open houses conducted during June 1973 prior to preparation of the plan and again during the month of September after completion of the draft plan. Seventy thousand copies of the draft plan were distributed to the public, resulting in the receipt of over 18,000 responses from individuals and organizations.

During the analysis phase, both natural resource and recreation expertise were focused on the popular recreation vehicle activity areas (Figure 2). A "check list" or balance sheet was prepared for each area to help weigh recreation values against those natural resource values which might be adversely affected by vehicular use.

Resources evaluated included soil, vegetation, wildlife, geologic features, research and educational values, recreation values, archeological sites, visual quality and air pollution. The evaluation also included using the criteria set forth in current Bureau regulations for designating vehicle use sites and areas for the operation of motorized vehicles. These criteria include: (1) resource production, (2) scenic quality, (3) erosion and siltation potential and (4) soil susceptibility to vehicle use. Candidate

INTERIM CRITICAL MANAGEMENT PROGRAM
FOR RECREATION VEHICLE USE ON THE CALIFORNIA DESERT

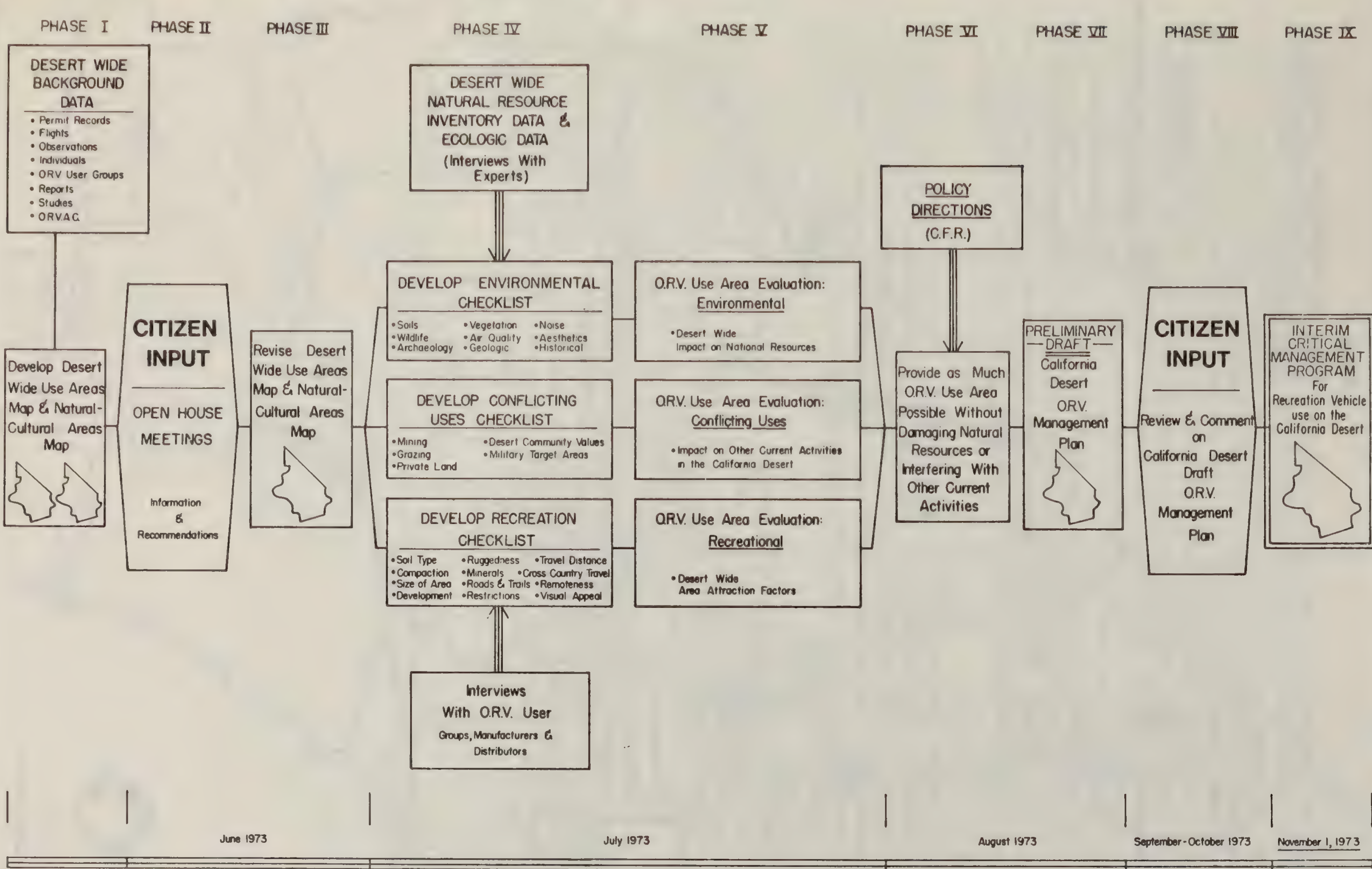


figure 1:

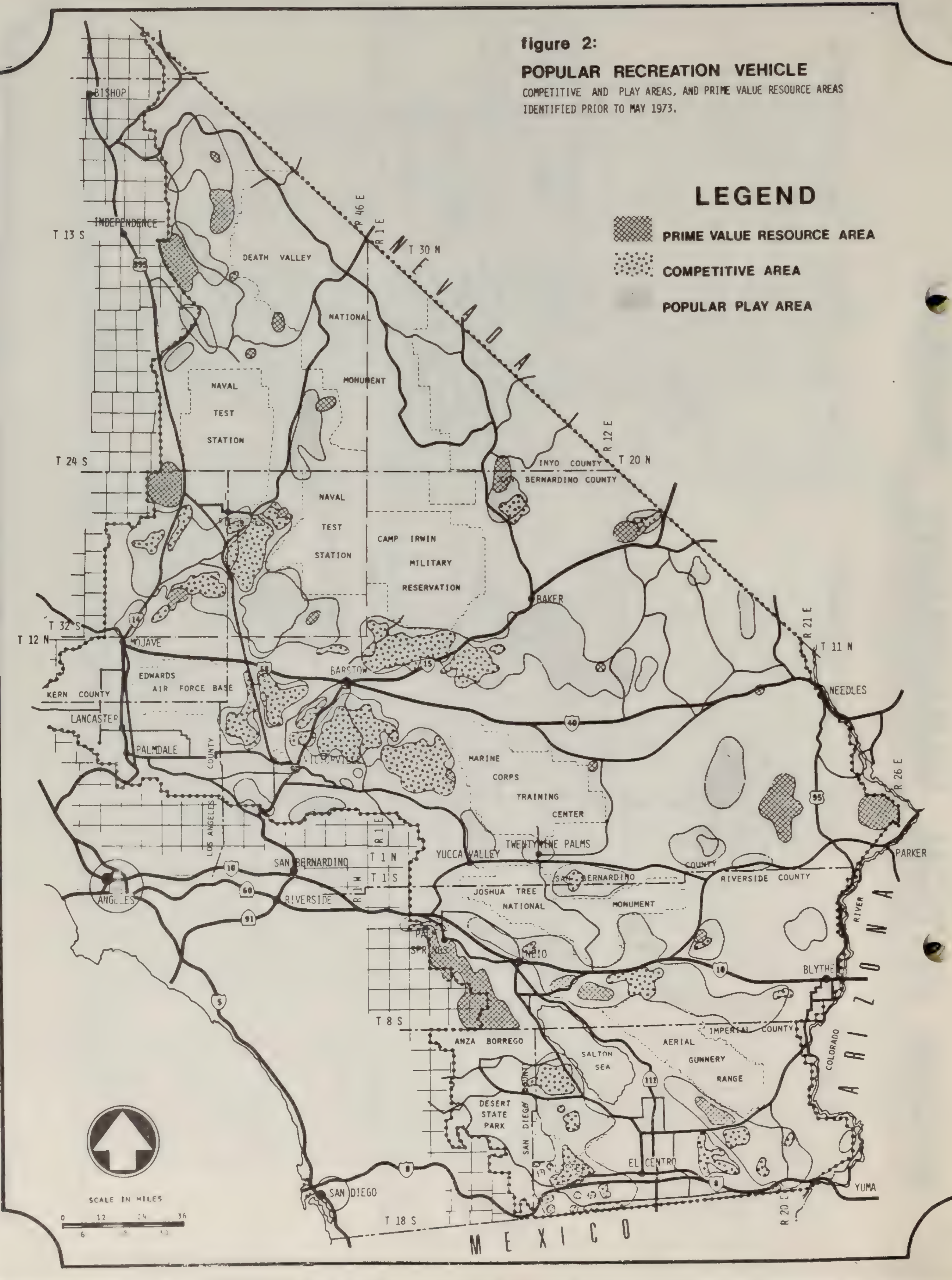


figure 2:

POPULAR RECREATION VEHICLE

COMPETITIVE AND PLAY AREAS, AND PRIME VALUE RESOURCE AREAS IDENTIFIED PRIOR TO MAY 1973.

"closed" and "restricted" areas were also evaluated to determine the level of management needed to protect or minimize risk to the more sensitive natural features from vehicular destruction. The location and design of "open," "closed" and "restricted" areas is based on the above evaluation and the effect of recreation vehicle activity on the objectives of other governmental agencies (e.g., military, national parks, Forest Service, Border Patrol, state agencies and local cities and counties). The final step, plan design and delineation, brings together the proposed designations shown on the plan and described below.

Figure A graphically presents the program in the form of a map showing the location of the various designations and special provisions. More detailed maps of each designated area showing boundaries and location are available at BLM District Offices in Riverside, Bakersfield and Sacramento.

It should be noted that this "Enrivonmental Analysis Record" report is only part of the information which was used in preparing the "Interim Critical Management Program." In addition to evaluation of the impact on natural resources and analysis of area attraction factors to recreation vehicle use, two other major factors were considered which are not documented in this report.

. Private Land Intermingled With National Resource Land. The impact of RV activity on private land and probable affects of this program was analyzed and proved to be an important planning consideration in determining RV use designations particularly the "open" and "special design" proposals.

. Management Objectives Of Other Public Agencies. This program considers the objectives of other federal, state and local government agencies particularly counties, incorporated cities, state parks, military, national parks, border patrol and national fares and service. The concerns of these agencies with respect to recreation vehicle activity was also considered in determining RV use designations.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

This section presents a base line of information upon which to build. It also highlights those resource factors potentially affected by off-road use of recreation vehicles. It is a statement of the quality of resources and experiences currently available in the California Desert. Very little of this information has appeared in other environmental analyses. Most of the information has not been collected or documented before.

Our purpose is to describe the state of the art of desert knowledge. It represents an intensive attempt to gather all available literature and expert opinion on the quality of resources as well as the degree of potential impact by vehicular activity.

Both present and potential quality of the existing environment were analyzed. Emphasis was placed on the present condition as it was on this condition that most information was available. Analyses or estimates of the potential recovery of already altered environments were attempted.

A. NON-LIVING ENVIRONMENT

The resources included in this section are: (1) soils, (2) geology, (3) air quality, and (4) water. These are principally nonrenewable. Although some may be renewable, the length of time of renewal exceeds several human generations.

1. Soils. The processes which are important in development of soils are similar in both humid areas and in desert regions. However, because of limited rainfall these processes are relatively less intense in the desert. For this reason the soil of the desert reflect much of the characteristics of its parent material (bedrock). The soils in the desert usually are low in organic matter and have low population of soil bacteria. This is why much of the soils of the desert are light colored.

A desert "pavement" of gravel is present over many of the soils. These were probably formed by the action of winds blowing the finer material away leaving the heavier gravel. Upper surfaces of stones are commonly stained black with manganese and iron oxides, called desert varnish. (Buol, Hole & McCracken 1973.)

Another feature of the soils in the desert is the "caliche" layer of carbonate accumulation. This layer of calcium carbonate is usually formed close to the surface because of the limited moisture available to move the carbonates through the soil profile. (Buol, Hole & McCracken 1973.)

Soil on steep slopes (topographic relief) are more prone to erosion than soils in the flats. Soils on steep slopes are usually shallow because soils are lost through run-off. Thus, there is less to erode on steep slopes. Also, the kind and degree of specialized development such as hardpan or caliche horizons are less on steep slopes.

Soils differ by aspect. South-facing slopes are under greater moisture stress as they receive more direct solar radiation. More vegetation grows on the north-facing slopes and consequently there is slightly more organic matter in the soil. Wind erosion is also most severe on slopes facing the predominant strong winds. The predominant wind's direction varies greatly throughout the desert.

Soil fungi are more important in the desert than elsewhere because of the lack of water. They are usually located in or near the thin surface crust of the soil, and they are responsible for holding the soil particles together. (Went & Stark 1968.) A layer of mycelium 1 mm thick could be formed in 3 or 4 months with one or two rains. The fungi usually also concentrate near the root systems.

The general soil map of the California Desert was used as the basis for determining the kinds of soil within the areas evaluated. This is a very general soil map with several soil series within each soil association. The evaluation of each soil association was made with the consideration of its major soil series as having the greatest influence in determining the impact for the soil association.

A special study of California Desert soils subejcted to recreational vehicle use was performed for the purpose of this analysis. This study was done in May 1973 by Babcock & Sons on ten sites throughout the California Desert. The criteria used for the evaluation from this report were changes in soil density, changes in void ratio and percolation rates of the surface horizon. From a soils engineering standpoint the poorly sorted sands (high percentage of similar size sand particles) of the dune areas showed the greatest resistance to vehicular use. The well graded soils, with a wide range of particle sizes, were the least resistant to vehicular use. A significant increase in density and decrease in porosity and percolation capacities caused by vehicular use were noted in the areas tested.

Using the sand dunes with sand textures as a low rating, different soil associations were evaluated on the basis of texture, erosion and siltation potential; considering surface textures, soil depth and slope.

From the general soils map the results of the above described study and an analysis of the durability of each soil, a "soils impact potential" map was developed (see Figure 3). This map rates soils as high, medium or low in their potential for impact from vehicles. This map graphically simplifies the complex capabilities of all 31 soil associations. Figure 4 summarizes the impact potential and the erosion and siltation potential for each association.

Description of Soil Associations

AC - Anthony/Cajon/Arizo Association:

Surface and subsoil textures vary from sandy loam to gravelly sand. This association occurs on nearly level to moderately sloping alluvial fans.

Figure 3:

SOILS IMPACT SENSITIVITY

THE RATINGS INDICATE SPECIFIC ORV IMPACTABILITY OF VARIOUS SOILS. CAPABILITIES OF EACH SOIL ASSOCIATIONS WERE ANALYZED IN FORMULATING THIS MAP.

RELATIVE RECREATION VEHICLE IMPACT POTENTIAL OF DESERT SOIL ASSOCIATIONS

Symbol	Soil Association	RV Effect	Erosion & Siltation Potential
AC	Anthony/Cajon/Arizo	H	H
AM	Adelanto/Mohave/Garlock	L	L
AX	Aqua Dulce/Rough broken land	H	H
BL	Badland	H	H
BO	Barstow/Oban/Hacienda	H	H
BR	Bull Trail/Rough broken land	H	H
CH	Calvista/Hivista/Cinco	M	M
CL	Crouch/LaPosta/Glenbrook	H	M
CM	Coachella/Mecca/Indio	L	L
CO	Calpine/Oak Glen/Mottsville	M	M
DR	Duneland	L	L
DT	Daggett/Tonopah/Bitter Spring	H	H
GR	Granite Rockland	L	L
IH	Imperial/Holtville	H	M
IT	Indio/Thermal	H	H
LR	Lava Rockland	L	L
MJ	Mariposa/Josephine/Sites	H	H
NI	Niland/Imperial	L	L
OJ	Ophir/James Canyon/Bishop	H	M
RL	Rosamond/Land/Playas	L	L
RM	Rositas/Mecca/Meloland	M	M
SI	Supan/Iron Mountain	M	M
TC	Toiyabe/Corbett/Granite Rockland	H	H
TP	Thermal/Playas	L	L
TS	Tujunga/Soboba/Riverwash	L	L
TW	Tortugas/Winona	H	H
VB	Vinton/Brazitos/Duneland	M	M
XA	Aco/Acolita/Rositas	M	M
XC	Sheephead/Crafton	H	H
XO	Chuckwalla/Orita/Rough broken land	M	M
XR	Carrizo/Riverwash	L	L

These soils are susceptible to compaction and the erosion and siltation potential is high. The even distribution of coarse fragments and soil particles make it susceptible to compaction and decreases its percolation rate.

AM - Adelanto/Mohave/Garlock Association:

Surface textures vary from sand to sandy loam and subsoil textures vary from sandy loam to sandy clay. These soils occur on nearly level to gently sloping alluvial fans and plains.

AX - Aqua Dulce/Rough Broken Land Association:

The surface texture is loam and the subsoil texture very gravelly clay loam. This association occurs on high terraces. The rough broken land is steep or very steep with numerous intermittent drainage channels. It has a cover of vegetation, as opposed to Badland which has sparse vegetation or complete lack of cover. It is highly erosive.

BL - Badland:

These areas are steep or very steep with moderately fine to fine surface textures. Geological erosion is active and the area has numerous intermittent drainage channels. The vegetation is usually vary sparse. The Badlands are usually located on Pliocene nonmarine sedimentary rocks.

BO - Barstow/Oban/Hacienda Association:

The surface textures vary from loamy sand to sandy loam and subsoil textures vary from sandy loam to clay loam. The soils in this association are susceptible to compaction. They have a high concentration of sodium making them unsuitable for plant development. This association occurs on terraces and alluvial fans and valley troughs.

BR - Bull Trail/Rough Broken Land Association:

The surface texture is sandy loam and the subsoil texture is clay loam. These soils occur on high terraces and alluvial fans. The rough, broken land area has a wide range of surface textures with steep or very steep slopes and numerous intermittent drainage channels.

CH - Calvista/Hivista/Cinco Association:

The surface textures range from sandy loam to loamy sand and subsoil textures vary from loamy sand to clay loam. These soils occur on nearly level to strongly sloping uplands. These soils are moderately compacted. Erosion potential is moderate.

CL - Crouch/La Posta/Glenbrook Association:

The surface and subsoil textures vary from sandy loam to loamy sand. The major portion of this association occurs on gently sloping to steep uplands in areas of deeply weathered granitic rocks.

CM - Coachella/Mecca/Indio Association:

Surface textures range from sand to sandy loam and subsoil textures from sand to silt loam. These soils occur on nearly level to gently sloping flood plains and basins making them resistant to any compaction.

CO - Calpine/Oak Glen/Mottsville Association:

The surface texture ranges from sandy loam to loamy sand. The subsoil textures range from clay loam to loamy sand. These soils occur on nearly level to moderately steep fans and low terraces. They are formed in alluvium derived mostly from granitic and related rock sources.

DR - Duneland Association:

These are areas of high hills or ridges of sand-sized particles drifted and piled up by the wind. The majority of these dunes are on or around margins of playas and were formed from shores of old Pleistocene lakes. The high concentration of similar size sand particles makes these soils highly resistant to compaction.

DT - Daggett/Tonopah/Bitter Spring Association:

Surface textures vary from gravelly sandy loam to sand and subsoil textures vary from very gravelly sandy loam to gravelly sand. These soils occur on convex and smooth, nearly level to strongly sloping alluvial fans and terraces. These soils are formed in very gravelly sandy alluvium from a variety of rocks, predominately granitic with some basaltic and rhyolitic materials.

GR - Granite Rockland:

These are areas with granite rock outcrops covering from 40 to 90 percent of the area. The soil is very shallow to none in most places.

IH - Imperial/Holtville Association:

The surface texture of this association is clay and the subsoil texture vary from clay to clay loam. The soils in this association occur on nearly level flood plains or lacustrine basins. These fine textured soils have a high potential to compaction.

IT - Indio/Thermal Association:

The surface textures range from sandy loam to clay loam and the subsoil textures range from silt loam to clay loam. These soils are on nearly level flood plains and basins at elevations of 200 feet below sea level to 300 feet above sea level. The parent material consists of recent alluvium derived from a variety of rock sources and deposited by the Colorado River and other streams. This association has a high compaction potential.

LR - Lava Rockland Association:

Volcanic material covers 40 to 90 percent of the area. The soil is very shallow to none.

MJ - Mariposa/Josephine-Sites Association:

The surface textures range from gravelly silt loam to loam and the subsoil ranges from gravelly silt loam to clay. The depths vary from shallow to very deep. This association occurs on gently sloping to steep mountainous uplands. This association is considered highly susceptible to RV impacts and highly erodable because of its high compactability and moderately steep to steep slopes.

NI - Niland/Imperial Association:

The surface texture of this association varies from gravelly sand to clay and the subsoil texture is clay. These soils occur on flood plain edges or nearly level flood plains. The major portion of this association has surface textures of gravelly sand or sand approximately 14 to 36 inches thick. This association has a high resistance to compaction and infiltration rates.

OJ - Ophir/James Canyon/Bishop Association:

Surface textures range from gravelly sandy loam to loam and subsoil textures vary from gravelly loamy sand to clay loam. These are poorly drained soils in stream bottoms or upland meadows. Has a high organic matter content and high water table making it very susceptible to compaction.

RL - Rosamond/Land/Playas Association:

The textures in this association are usually moderately fine or fine. These soils occur on the lower margins of fans, between the sloping fans and basins and playas. Slopes are nearly level to level and they are formed in alluvium derived mostly from granitic and similar rocks. These soils have a low erosion and siltation potential.

RM - Rositas/Mecca/Meloland Association:

The surface textures range form fine sand to sandy loam and the subsoil ranges from sand to clay. These soils are formed in sand blown from recent alluvium and nearly level lacustrine basins.

SI - Supan/Iron Mountain Association:

The surface textures range from loam to sandy loam and the subsoil textures range from loam to clay loam. These soils occur on sloping plateau-like areas or steep slopes and narrow divides at elevations of 1,500 to 5,000 feet. Underlying rock is andesitic and basaltic tuff-breccia or similar rock.

TC - Toiyabe/Corbett/Granite Rockland Association:

The surface textures range from coarse sandy loam to loamy and the subsoil textures range from loamy coarse sand to loamy sand. These soils occur on sloping to very steep mountainous areas. The major portion of this association has soil depths that are shallow to bedrock.

TP - Thermal-Playas Association:

The textures in this association are usually moderately fine to fine. These soils occur on lacustrine basins and playas. The major portion of this association is located in areas of playas. Slopes are nearly level to level and they are formed in fine and moderately fine "silty" alluvium derived from a variety of rock sources.

TS - Tujunga/Soboba/Riverwash Association:

The surface textures range from sand to loamy sand and subsoil textures range from sand to very gravelly sand. These soils occur on fans, flood plains and drainage ways and are formed in alluvium derived mostly from granitic sources.

TW - Tortugas/Winona Association:

The surface and subsoil texture for this association is cobbly loam. These soils occur on moderately steep to very steep mountainous areas. These soils are very shallow to bedrock.

VB - Vinton/Brazitos/Duneland Association:

The surface textures range from sand to sandy loam with the majority of the area having loamy sand textures. The subsoil textures range from sand to loamy sand. These soils occur on nearly level or very gently sloping flood plains or low terraces.

XA - Aco/Acolita/Rositas Association:

Surface and subsoil textures vary from sandy loam to sand. These soils occur on nearly level to gently sloping terraces slightly above the flood plain or low dunes or dune ridges. These soils were developed in wind-modified coarse and moderately coarse textured sediments derived from mixed sedimentary and crystalline rocks.

XC - Sheephead/Crafton Association:

The textures of the surface horizon ranges from sandy loam to loamy fine sand and the subsoil textures is gravelly sandy loam. These soils occur on moderately sloping to very steep uplands at elevations of 2500 to 6000 feet.

XO - Chuckwalla/Orita/Rough Broken Land Association:

The surface textures range from gravelly silt loam to loamy sand and subsoil textures range from very gravelly clay loam to fine sandy loam. Some of the area has high concentrations of sodium making it undesirable for plant growth. These soils occur on old fans and terraces with nearly level to level slopes. These soils are developed in somewhat stratified alluvium derived from a wide variety of rocks.

XR - Carrizo/Riverwash Association:

Textures of the surface and subsoil range from gravelly sand to sand. These soils occur on nearly level to moderately sloping flood plains and recent alluvial fans and also drainage ways.

2. Geology. The southern California desert region is divided into three geological provinces: (1) Basin-Range, (2) Colorado Desert, (3) Mojave Desert. Each of these provinces is a storehouse of unique geological occurrences and significant mineralization.

Basin-Range Province

The area adjacent on the east, west and south of Death Valley is the part of the Basin-Range province with which this study is concerned. The south boundary is marked by the east-west trending Garlock Fault.

The region has been subjected to intense faulting which began at an early geologic time and has continued into recent time. The ranges, uplifted as tilted fault blocks, are rugged, barren and multi-colored. They stand out starkly from the sediment filled valleys. Many of the valleys are closed basins which in earlier time were sites of large deep fresh water lakes. Now with a more arid climate they contain non-permanent lakes. Occasionally during a wet season the basin will have a thin sheet of water which soon evaporates leaving saline coating on the mud flats. These flat dry lake beds are favorite gathering places for recreation vehicle users.

The presence of the former lake sites is marked by the dry lake beds (playas) and here and there wave-cut terraces above the level of the playa. Occasionally, evidences of former lakes are provided by deposits of porous lime rock, called Calcareous Tufa. A notable example of these Tufa spires is the Pinnacles, over 100 feet tall, south of Searles Lake.

Sand dunes are not abundant in the Basin-Range province. Two important dune areas are Dumont and Eureka. These geologic features are built principally by strong, prevailing winds, such as are common in desert areas, and are best developed where the direction of blow is uniform. There must be a source of sand.

Mojave Desert Province

This area is bounded on the north by the Garlock Fault, on the west by the Tehachapi Mountains, on the south by the San Andreas Fault and the Colorado Desert.

Here faulting has been conspicuous and has been the prime control in the landscape evolution. Recent volcanic activity is seen in rough surfaced, hard rock lava flows, filling valley floors and forming upland mesas. Frequently the lava flows are associated with cinder cones and lava craters.

In the Mojave Desert the fault basins between mountain ranges are commonly very wide compared to the width of the ranges. This geologic feature, quite often, gives the recreation vehicle observer a strong feeling of open space and vastness.

Just as in the Basin-Range province to the north, this desert has closed basins with playa floors and wave-cut terraces of the former lakes lying higher in elevation. The important playas are: Soda, Silver, Silurian, Koehn, Coyote, Goldstone, Mirage, Lucerne, Bristol, Cadiz, Dale and Danby.

Southeasterly of Soda Lake in the Kelso Basin is a large area of sand dunes. Access to these dunes is relatively difficult and they have not been fully exploited.

Colorado Desert Province

This province is composed of the Imperial and Coachella Valleys, bounded on the east by the San Andreas Fault and on the west by the San Jacinto Mountains and a complex fault system. The basin closes on the north against the Mojave Desert and widens to the south and continues into the Gulf of California. The lowest point, of this below sea-level basin, is occupied by the Salton Sea.

The basin once held a large fresh water lake, fed by the Colorado River. Above the present Salton Sea shorline are numerous wave-cut terraces and cliffs and fresh water shell beds. The sands of these ancient beaches, coupled with strong southerly winds, have furnished material for the extensive sand dunes southeasterly of the sea and smaller dunes along the west shore.

Along the borders of the Salton Basin, there are extensive badland areas mainly in the Mecca and Indio Hills. Badlands are characterized by a maze of gorges separated by round-crested or sharp-crested ridges. They are developed by rapid water erosion in soft unconsolidated rock formations barren of vegetation.

Both the San Andreas fault and the Borrego Fault have had recent activity with clearly defined fault scarps. Where the scarps cross unconsolidated sedimentary rocks the fault trace is fragile and easily marred.

3. Air Quality. Prior to the 1950's, air quality could generally be considered extremely high throughout the desert area. Pollution was generally limited to particulates, driven by the frequent desert wind storms. In recent years, however, rapid urbanization and development in adjacent airsheds has, in conjunction with climatic conditions, caused a spillover of pollutants into the desert. In an attempt to locate areas sensitive to air pollution, the Riverside and San Bernardino Air Pollution Control Districts were contacted as well as the Air Pollution Laboratory on the campus of the University of California, Riverside.

Because of the organization of air pollution control in California along political lines, the desert has been somewhat arbitrarily divided into two large airsheds: The Great Basin Air Basin, including the desert area north of the San Bernardino County line; The Southeast Desert Air Basin, which covers the area south of the San Bernardino County line, and is subdivided into High and Low Desert areas. The South Coast Air Basin which lies adjacent to the area, to the west, includes Orange County, Ventura County, the southern two-thirds of Los Angeles County, the southwest corner of San Bernardino County, and the western one-quarter of Riverside County. While the South Coast Basin is not included in the desert area, it is one of the major sources of pollutants in the desert and therefore, must be considered when discussing air quality in the desert area. The combination of high levels of pollution in the South Coast Air Basin, strong winds from the west, plus heavy traffic through San Gorgonio Pass are causing increasing levels of pollution in the Coachella Valley-Palm Springs area.

The South Coast Basin is subject to frequent periods of climatic inversion during which pollutants are concentrated for a period of time then forced through San Gorgonio Pass and out into the desert area. Concentrations of pollutants are heavy at Cajon Pass but do not generally extend out into the high desert area above the Pass. Therefore, a tentative conclusion that can be drawn is that the high or Mojave desert areas within the Southeast Desert Air Basin are not highly susceptible to present concentrations of air pollutants. The low desert areas in the Southeast Desert Air Basin, however, are much more susceptible; largely because pollutants funnel through San Gorgonio Pass and partly because of the local concentration of population in the Coachella Valley. There is also a heavy traffic flow on Interstate 10 through the valley and the area is often subject to temperature inversions which hold in the pollutants. All of the valley areas southeast of San Gorgonio Pass, therefore, are areas that may be sensitive to increased air pollution.

a. Ambient Air Quality Standards. Ambient air quality standards applicable in California include state standards and both primary and secondary federal standards. Figure displays the standards for photochemical oxidants, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulates, lead, hydrogen sulfide, and hydrocarbons.

b. Air Basins. Air quality varies from air basin to air basin. (Figure 6, 7 & 8)

(1) Southeast Desert Air Basin. Until recently most air pollution in this area emanated from local sources such as burning dump

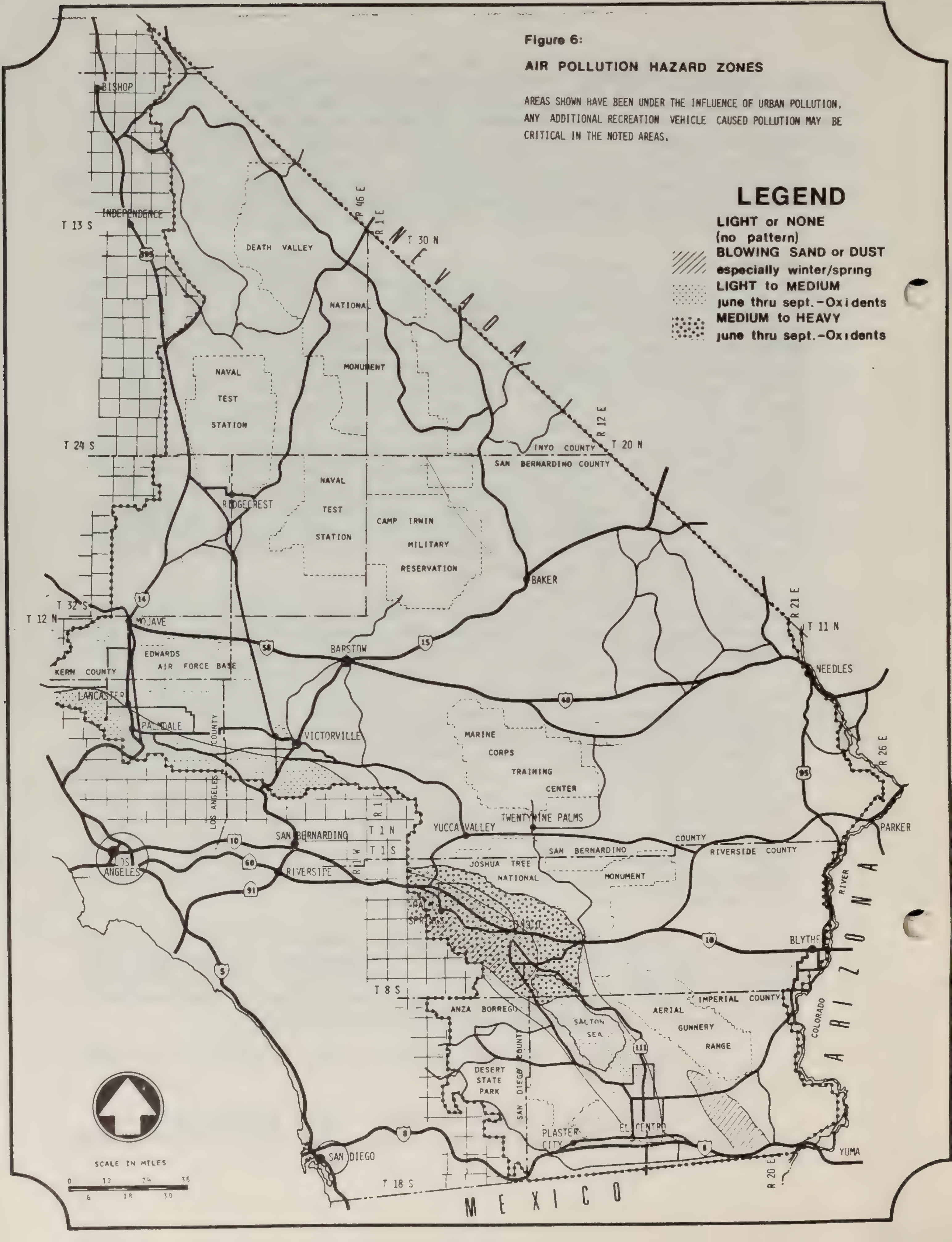


Figure 6:

AIR POLLUTION HAZARD ZONES

AREAS SHOWN HAVE BEEN UNDER THE INFLUENCE OF URBAN POLLUTION. ANY ADDITIONAL RECREATION VEHICLE CAUSED POLLUTION MAY BE CRITICAL IN THE NOTED AREAS.

Figure 5

AMBIENT AIR QUALITY STANDARDS APPLICABLE IN CALIFORNIA

Pollutant	Averaging Time	CALIFORNIA STANDARDS		FEDERAL STANDARDS[4]		
		Concentration[7]	Method[1]	Primary[2], [7]	Secondary[3],[7]	Method[5]
Photochemical Oxidants (Corrected for NO_2)	1 hour	0.10 ppm (200 $\mu g/m^3$)	Neutral Buffered KI	160 $\mu g/m^3$ [8]	Same as Primary	Chemiluminescent
Carbon Monoxide	12 hours	10 ppm (11 mg/m^3)	Non-dispersive Infrared Spectroscopy	- - -	Same as Primary Standards	Non-dispersive Infrared Spectroscopy
	8 hours	- - -		10 mg/m^3 (9 ppm)		
	1 hour	40 ppm (46 mg/m^3)		40 mg/m^3 (35 ppm)		
Nitrogen Dioxide	Annual Average	- - -	Saltzman Method	100 $\mu g/m^3$ (0.05 ppm)	Same as Primary Standard	Colorimetric Method Using NaOH
	1 hour	0.25 ppm (470 $\mu g/m^3$)		- - -		
Sulphur Dioxide	Annual Average	- - -	Conductimetric Method	80 $\mu g/m^3$ (.03 ppm)	60 $\mu g/m^3$ (0.02 ppm)	Pararosaniline Method
	24 hours	0.04 ppm (1.05 $\mu g/m^3$)		365 $\mu g/m^3$ (0.14 ppm)	260 $\mu g/m^3$ (0.10 ppm)	
	3 hours	- - -		- - -	1300 $\mu g/m^3$ (0.5 ppm)	
	1 hour	0.5 ppm (1310 $\mu g/m^3$)		- - -	- - -	
Suspended Particulate Matter	Annual Geometric Mean	60 $\mu g/m^3$	High Volume Sampling	75 $\mu g/m^3$	60 $\mu g/m^3$	High Volume Sampling
	24 hours	100 $\mu g/m^3$		260 $\mu g/m^3$	150 $\mu g/m^3$	
Lead (Particulate)	30-day Average	1.5 $\mu g/m^3$	High Volume Sampling, Dithizone Method	- - -	- - -	- - -
Hydrogen Sulfide	1 hour	0.03 ppm (42 $\mu g/m^3$)	Cadmium Hydroxide STRactan Method	- - -	- - -	- - -
Hydrocarbons (Corrected for Methane)	3 hours (6-9 a.m.)	- - -	- - -	160 $\mu g/m^3$ (0.24 ppm)	Same as Primary Standard	Flame Ionization Detection Using Gas Chromatography
Visibility Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility[6] to 10 miles when the relative humidity is less than 70%		- - -	- - -	- - -

NOTES:

(1) Any equivalent procedure which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

(2) National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency (EPA).

(3) National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after implementation plan is approved by the EPA.

(4) Federal Standards, other than those based on annual averages or annual geometric means, are not to be exceeded more than once per year.

(5) Reference method as described by the EPA. An "equivalent method" of measurement may be used, but must have a "consistent relationship to the reference method" approved by the EPA.

(6) Prevailing visibility is defined as the greatest visibility which is attained or surpassed around at least half of the horizon circle, but not necessarily in continuous sectors.

(7) Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury.

(8) Corrected for SO_2 in addition to NO_2.

Figure 7

DAYS ON WHICH OXIDANT LEVELS EXCEEDED STATE STANDARDS (1971)*

Month	Riverside	Banning	Palm Springs	Indio	San Bern.	Victorville
Jan.	8	1	3	0		
Feb.	11	0	7	1		
Mar.	16	10	16	10		
Apr.	14	2	15	12		
May	17	6	13	16		
June	25	15	23	27		
July	31	19	17	27		
Aug.	31	12	10	20		
Sept.	28	5	15	19		
Oct.	15	1	3	8		
Nov.	11	0	4	2		
Dec.	0	0	0	0		
Total	207	71	126	142	148	53

*California State Standards for Oxidant Level = 10 ppm/1 hour.

Figure 8

NUMBER OF HOURS IN WHICH THE STATE STANDARD OXIDANT LEVEL WAS EXCEEDED (1971)*

Month	Riverside	Corona	Banning	Indio	Palm Springs
Jan.	26	16	2	0	11
Feb.	46	19	0	61	1
March	89	52	34	66	210
April	68	49	7	126	162
May	91	38	18	172	73
June	221	7	59	364	214
July	254	132	68	323	144
August	258	93	24	174	31
Sept.	212	125	13	180	118
Oct.	80	74	11	25	8
Nov.	32	17	0	7	12
Dec.	0	0	0	0	0
Total	1377	622	236	1498	984

* 10 ppm/1 hour.

sites, cement plants and livestock feed lots. Now there is measurable evidence that air pollution is present from Riverside to beyond the Salton Sea. It is often visible and measurable. Much of this appears to be results of intrusions of air from the South Coast Basin along with an increasing traffic flow on Interstate 10. The South Coast Air Basin is one of the major air pollution concentration areas in the United States. "In 1970 this area did not meet state air quality standards for photochemical oxidant (such as ozone) on 65 percent of the days, for carbon monoxide on 55 percent of the days, and for nitrogen dioxide on 31 percent of the days. Clean air was three decades behind us and state and local agencies estimated it is two decades ahead - in 1990." (California Institute of Technology, 1972.)

The areas east of the Salton Sea and the Imperial Valley are probably not as sensitive to recreation vehicle use because of the low population, distance from intrusion sources, and the increased possibility of dispersion of pollutants. The Coachella Valley area would seem to be the most sensitive area to increased pollution. The Riverside County APCD studied air quality in the Coachella Valley in 1971. Two major sources were identified: oxidant pollutants, brought in by winds from the west, and particulates from the lower end of the Coachella Valley. The oxidants appear to be aged photochemical pollutants from the South Coast Air Basin. The oxides of nitrogen had already photochemically converted to nitrogen dioxide. It was felt that local traffic was not a significant input because the measured levels of oxides of nitrogen were low. The high level of particulates in the air in the Coachella Valley area appear to be due to sand and gravel operations, vehicle movements on unpaved roads, agricultural burning, open burning dumps and cultivation practices. The most common daytime wind direction is from the southeast in the lower end of the valley. Because of the prevailing northwesterly winds in the Palm Springs area more particulates are carried to the lower and middle valleys than to the northern end of the Coachella. Because of the physiography of the valley, intrusive air masses are trapped and are at times subject to subsidence, which results in concentration of air pollutants close to the surface.

The San Bernardino APCD has begun to compile air quality data for the high desert portion of the Southeast Desert Air Basin. Although some data are available for Barstow, Victorville and Needles, no long term records exist. Records indicate that Victorville is consistently below other recording stations, in Riverside and San Bernardino Counties, in concentration levels. It is probable that Barstow, Needles and other desert communities would also be below stations in the South Coast Air Basin and stations in the vicinity of the Coachella Valley. More importantly, the total time that these conditions persist is much higher in Riverside and Indio (6-10 hours per day) than in San Bernardino and Redlands (averaging about 5 hours per day) and Victorville (slightly over 1 hour per day). Recreation vehicles would seem to have little impact in this portion of the air basin.

(2) Great Basin Air Basin. Because it is located far from population centers and is not subject to an influx of contaminated air from other air basins, the Great Basin Air Basin would appear to be relatively pollution free. However, there are virtually no data on air

pollution sources or ambient air quality in this basin. A major highway, U.S. 395, traverses the area from north to south, but there is little evidence of a pollution problem. One condition that may contribute to future problems is the presence of temperature inversions during the fall-winter period. At the present time recreational vehicle use would seem to have little effect upon this Basin's air quality.

4. Water.

a. Precipitation. Precipitation in approximately 90 percent of the desert averages less than 5 inches per year. The remaining 10 percent averages from 5 to 10 inches per year (Figure 9). There are two high rainfall periods, late winter-early spring and late summer-early fall.

b. Watershed. An estimated 2 million acres of desert watershed could, under heavy rainfall conditions, carry sediments into or otherwise do flood damage to populated and agriculturally significant areas. An estimated 20 percent or 400,000 acres of this is under Bureau of Land Management administration, at least in part. This BLM administered watershed lies in areas of generally sandy soils, gentle slopes and very low rainfall. Therefore, potential downstream impacts of watershed damage are expected to be site oriented and localized in importance. The vast majority of the desert watershed under BLM administration drains into unpopulated, closed basins or dry lake beds. For these reasons, problems of downstream siltation and flood damage resulting from recreation vehicle activity are expected only in very localized situations which can be solved by management on a local basis.

c. Ground Water Pollution. Pollution of ground water basins by the wastes of recreationists does not appear to be a severe problem for several reasons. Where concentrations of people gather for competition events, chemical toilets are required. Many of the people who concentrate for other recreation purposes use self-contained trailers and camper units. Since the desert is characterized by low precipitation, and extreme temperatures, the risk of carrying harmful biological pollutants into a ground water supply from general recreation would seem low to nonexistent. However, certain sites such as those in the immediate vicinity of springs and shallow wells are probable exceptions which might be impacted.

d. Springs. Springs are an important resource in the California Desert. Springs are simply a flow of ground water emerging naturally onto the surface. The desert contains virtually thousands of springs, but nonetheless, they are a highly localized source of water that differs greatly in types. This wide variety of spring types is the result of underground conditions that vary greatly from one place to another. Springs may vary from small seepages that may appear to dry up under the desert sun to large springs with fairly constant discharges that produce standing pools in natural tanks in the desert.

Springs provide a major water source for most of the desert's wildlife. They are especially important to ungulates such as the Desert Bighorn and a primary water source for birds, especially of the game variety. As well, in many situations, springs allow for the dense growth and a wide variety of vegetation which in turn can support a variety and density of animal life.

Because of their location, many of these springs presently attract many of the desert's recreational users. Increased vehicular activity in these

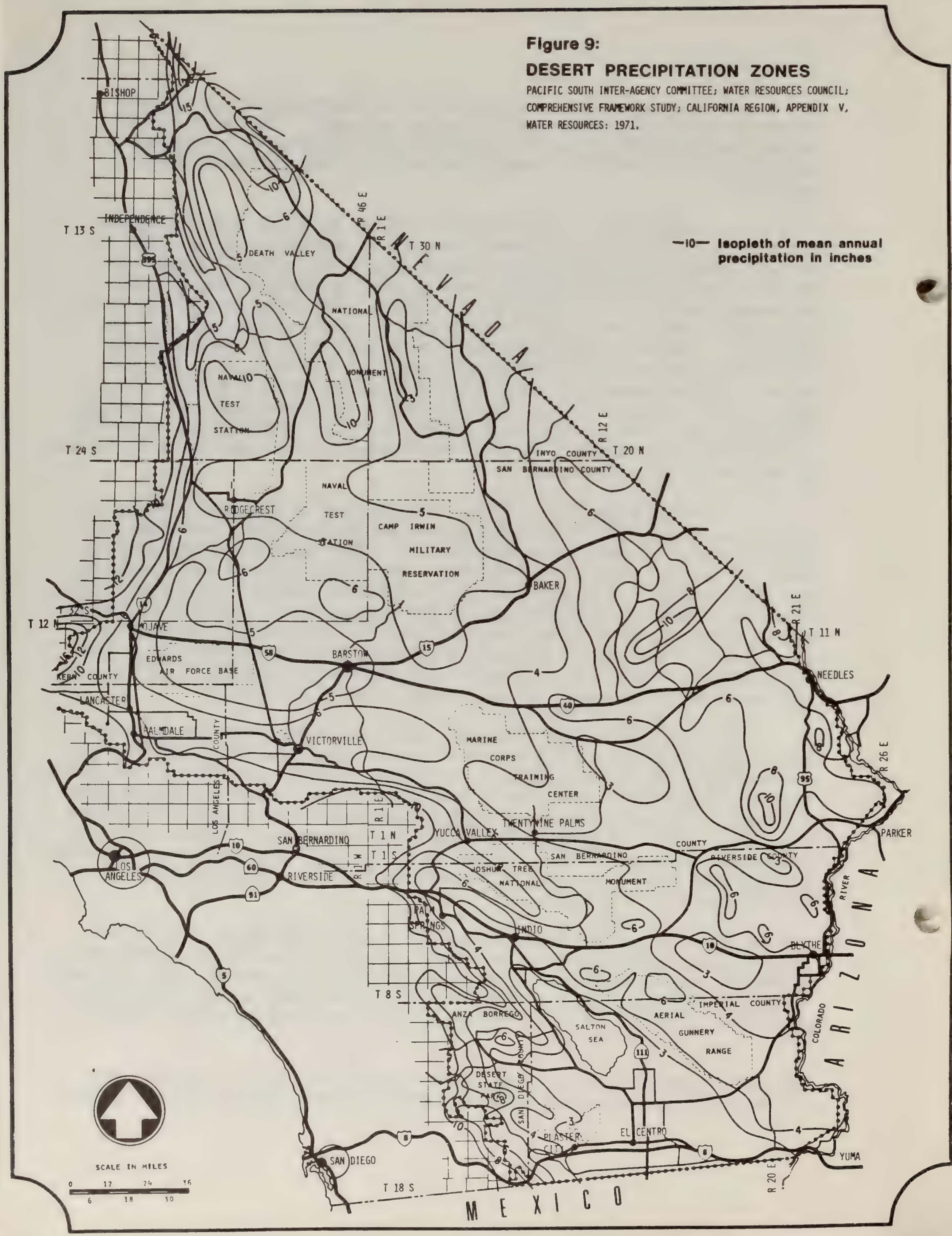


Figure 9:

DESERT PRECIPITATION ZONES

PACIFIC SOUTH INTER-AGENCY COMMITTEE; WATER RESOURCES COUNCIL; COMPREHENSIVE FRAMEWORK STUDY; CALIFORNIA REGION, APPENDIX V, WATER RESOURCES: 1971.

areas threatens the delicate biological balance which many of these springs maintain. Vehicles can directly impact the vegetation and continual impact can totally eliminate the less resistant species. The topographic and geologic features which springs produce can also be directly impacted by vehicular activities destroying their productive potential. Unthinking vehicle users can impact springs by dumping trash and other waste in and around them. Continual, uncontrolled vehicular and recreational use around springs can indirectly result in the diminishing of both animal and plant communities and increases the strain on endangered species. With the growing people pressure on the California Desert and the increasing ability of recreational vehicles to reach entire remote areas, limited and highly localized resources such as springs and the life they support are threatened.

1. Vegetation. Desert plants are unique, as compared to plants of adjoining ecosystems. The differences are adaptations for water utilization and preservation. Among perennial species these include variations in total leaf surface, stomatal modification to reduce evapotransportation loss rate and waxy or hairy leaves. (Ashby, 1932; Runyon, 1934; and Chew, R.M. and A.E., 1973).

Among annual species, drought resistance in the seed stage permits viable seeds to remain dormant in the soil until moisture and temperature conditions are favorable for germination and survival (Went, 1948; Went and Westergaard, 1949). These unique characteristics which are physiological adaptations for desert survival, do not necessarily increase or decrease the vulnerability of the plants to recreation vehicle damage. Many desert plants are armed with spines or thorns which can do damage to person or vehicle. The lower growth forms and unarmed plants are the first to show damage on heavily used sites. For example, aerial photographs show trail patterns consistently avoiding creosote bush (*Larrea divaricata*), a larger shrub with brittle stems, notorious for puncturing tires. Concentrated use areas show severe damage to bursage (*Franseria dumosa*), a common species associated with creosote bush which is lower growing and not a hazard to vehicles.

Experience has shown that sites and trails heavily and repeatedly used do not readily revegetate, even under good moisture and temperature conditions. On the other hand, sites and trails which had been severely scarred and then left, revegetated with perennial resprouts, annual grasses and forbs as soon as moisture and temperature conditions permitted. The difference in response to moisture and temperature conditions was probably caused by the degree of soil compaction and top soil loss on the repeatedly used sites.

Seventeen broad plant communities are represented in the desert area. With some variations and additions, the plant communities used are as described by P. A. Munz in "A California Flora, 1959." The variations are as follows: Desert Washes have been considered as ecological communities apart from the surrounding country, and further separated by location in the Mojave or Colorado Desert. The Creosote Bush Scrub Community is considered two communities, a Mojave Desert Creosote Bush Scrub or a Colorado Desert Creosote Bush Scrub. Additional plant communities recognized include a desert grassland community, a palm oasis community, a digger pine woodland, and a riparian/aquatic community. The various communities have characteristics which make them either vulnerable or resistant to vehicular damage.

A descriptive discussion of each of the communities will generally relate its vulnerability to its relative importance or resource value. (Figure 10.)

Creosote Bush Scrub (Approx. 60% of Desert Area)

This community is the most widely spread of all, being well represented throughout the desert by a creosote bush (*Larrea divaricata*) - bursage (*Franseria dumosa*) association. For this report, this community is separated into two parts, the Mojave Desert and the Colorado Desert. The

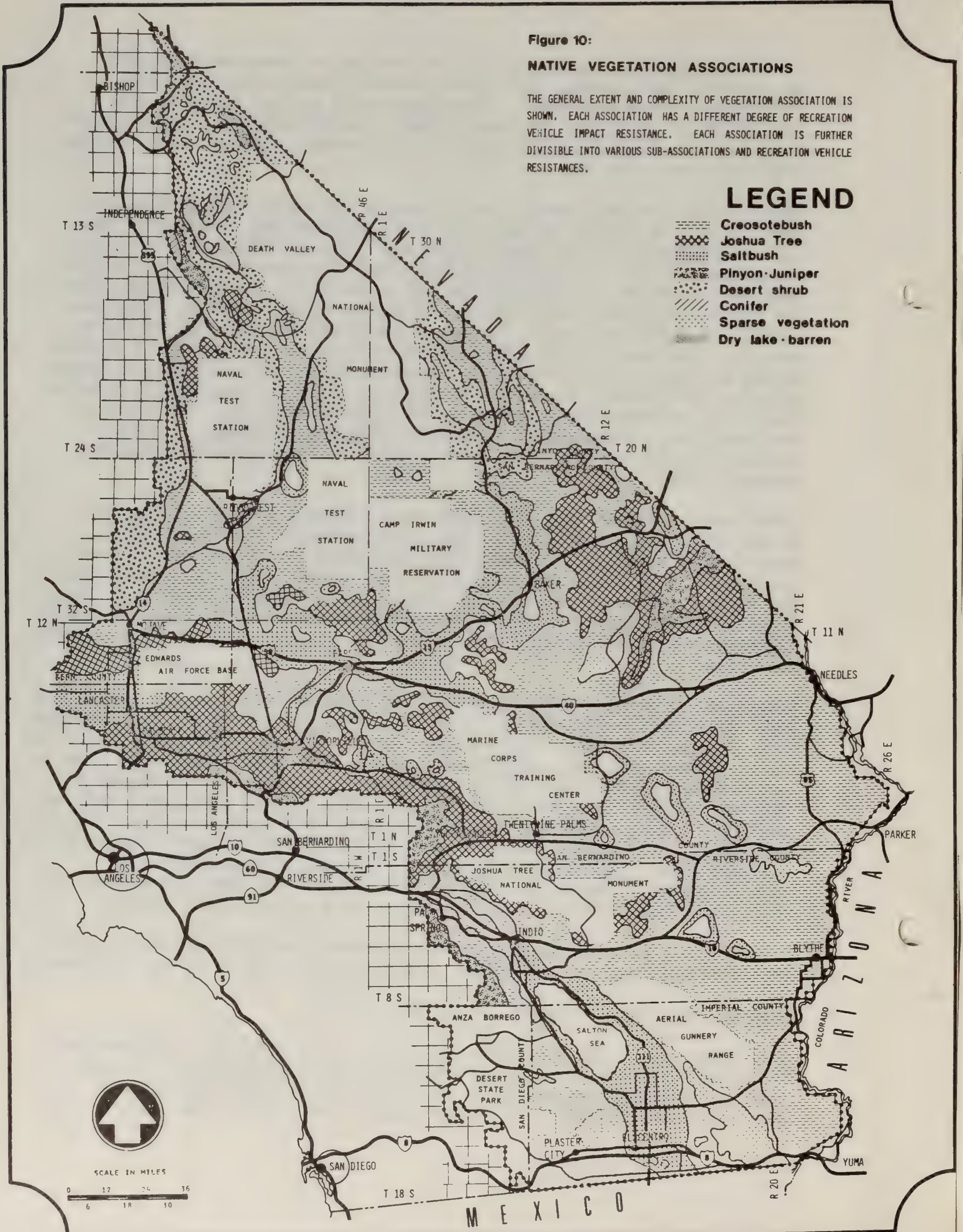


Figure 10:

NATIVE VEGETATION ASSOCIATIONS

THE GENERAL EXTENT AND COMPLEXITY OF VEGETATION ASSOCIATION IS SHOWN. EACH ASSOCIATION HAS A DIFFERENT DEGREE OF RECREATION VEHICLE IMPACT RESISTANCE. EACH ASSOCIATION IS FURTHER DIVISIBLE INTO VARIOUS SUB-ASSOCIATIONS AND RECREATION VEHICLE RESISTANCES.

separation is made because the community changes identifiably from one desert to the other. Two species are important in the association in the Colorado Desert which are only minor components in the Mojave Desert. These are fagonia (Fagonia californica) and brittlebush (Encelia farinosa). In terms of standing biomass, the Colorado Desert sites are much poorer than the Mojave Desert sites. Over-all, this community is the largest plant community and the least productive on both deserts. Potential recreation vehicle damage to the community is considered low for the following reasons. The plants are generally shrubby and widely spaced. To the non-botanist the plants are quite drab and low attraction. Many plant species are armed with spines.

Joshua Tree Woodland (approx. 15% of desert area)

This community occupies intermediate to higher elevation slopes on deep well-drained soils. In terms of standing biomass, the joshua tree woodland occupies the most productive sites on the desert. This community is considered highly vulnerable to recreation vehicle damage because of its accessibility, general passability of terrain, attractiveness to recreationists and density of vegetation.

Alkali Sink (approx. 15% of desert area)

The alkali sink community is represented primarily by allscale saltbush (Atriplex polycarpa). The community occupies saline or alkaline areas throughout the desert. Its most common habit is a ring of vegetation around playas on ancient dry lake sites. In terms of standing biomass, this is one of the less productive areas. The playas attract recreationists; however, the community is considered resistant to recreation vehicle damage because the plants are shrubby and widely spaced encouraging avoidance.

Pinon-Juniper Woodland (approx. 5% of desert area)

The pinon-juniper woodland community is distributed on the mountain ranges of the Mojave Desert and on the western edge of the Colorado Desert, at elevations from 4,500 feet and above. This community occupies more highly productive sites, in terms of standing biomass. The community is considered resistant to recreation vehicle damage because of the stature of the component species and the steep, rough terrain it generally occupies.

Shadscale Scrub (approx. 1% of the desert area)

The shadscale scrub community is represented by shadscale (Atriplex confertifolia), spiney hopsage (Grayia spinosa), and white sage (Eurotia lanata). Although individual species grow throughout the desert, the community is only recognizably intact northwest from Barstow, in saline sites. The sites occupied by the shadscale scrub are typically low in productivity, in terms of standing biomass. This relatively low productivity is attributable to dense, saline soils and low rainfall.

The shadscale scrub community can be considered resistant to damage from recreation vehicles for several reasons. The community occupies sites

which are relatively remote from the major population centers of southern California. The plants are shrubby growth forms. Plants are usually widely enough spaced to permit vehicular passage around them. Individual plants often occupy hummocks which discourage direct impact from vehicles.

Desert Slope Chaparral (less than 1% of the desert area)

The chaparral community, characterized by the genera *Adenostoma*, *Quercus*, *Arctostaphylos* and *Ceanothus* is restricted to slopes along the far western edge of the desert area. These are highly productive sites in terms of standing biomass. The productivity is attributable to elevation as it affects temperature and precipitation, productive soils and, to a degree, coastal influence. This community can be considered resistant to recreation vehicle damage for several reasons. The sites occupied are steep and often rocky. The plant growth forms are large, shrubby to tree-like. The plant density is great enough to inhibit vehicular passage.

White Fir Forest (less than 1% of desert area)

The white fir forest occupies a single site in the desert area, the upper slopes of Clark Mountain in eastern San Bernardino County. This community is protected from recreation vehicle damage by the remoteness of the area, rough, steep terrain, and the stature of the plants in the community.

Oak Woodland (less than 1% of desert area)

This is a community which takes the form of small isolated stands in areas of the San Bernardino and New York Mountains. The oak is locally important as forage and cover to wildlife. Because of its tree-like growth form, the oak is not vulnerable; however, the oak trees do attract recreationists who cause damage to understory plants. Because of remoteness of location and rough terrain these sites have not yet been heavily impacted.

Palm Oasis (less than 1% of desert area)

The palm oasis is found represented along the San Andreas fault and in steep, rocky wet sites of the desert ranges in the Colorado Desert. The community is characterized by California Fan Palm (*Washingtonia filifera*). The palm oasis, because it occupies wet sites, is normally a highly productive community in terms of standing biomass. The sites are typically wildlife habitat centers because of the water, forage and cover concentration. This community can be considered vulnerable to recreation vehicle damage for the following reasons. The palm groves attract recreationists who can damage the understory plants. It must be recognized that many of these palm groves are only accessible by foot traffic or horseback. It is also recognized that these inaccessible sites lie in heavily vegetated drainage ways and forcing access to them will heavily impact a high value resource.

Desert Grassland (less than 1% of desert area)

This community is restricted to very small sites throughout the desert. The sites may be duneland with Indian ricegrass (*Oryzopsis hymenoides*),

galleta grass (Hilaria rigida), and sand dropseed (Sporobolus cryptandrus), or uplands with bluegrass (Poa spp.) and gramma grass (Bouteloua spp.). The grass community is normally high in value to wildlife and livestock. Since the plants are not a hazard to recreation vehicles, and the community often occupies attractive areas, this community is vulnerable to recreation vehicle damage.

Riparian/Aquatic (approx. 1% of desert area)

The riparian/aquatic community occupies isolated, relatively small, wet sites throughout the desert area. Wherever these sites are located, they constitute the habitat center of the area for wildlife in terms of forage and cover. This plant community is probably the most important community to the vegetation dependent resources such as wildlife, recreation and livestock grazing. It is the most vulnerable of the plant communities because of the growth form of its component species, its typical location, compactable soils and its attraction to visitors.

Digger Pine Woodland (less than 1% of desert area)

This community is located in the northwestern corner of the desert area. It is identifiable by the overstory of digger pine (Pinus sabiniana). The sites are highly productive in terms of standing biomass. The community is resistant to recreation vehicle damage by its remote location, steep slopes and rough terrain.

Bristlecone Pine Forest (less than 1% of desert area)

The bristlecone pine forest is a community occupying only a very small portion of the desert area. It is currently receiving attention as a unique microhabitat for the unique bristlecone pine (Pinus aristata).

Desert Wash

Since the desert wash generally receives the most benefit from moisture and is often associated with deeper, better drained soils, it is the key to wildlife survival in most desert habitats. Therefore, the desert wash of plant community has been further subdivided by Mojave Desert and Colorado Desert area. Colorado Desert washes support palo verde (Cercidium floridium), smoke tree (Oalea spinosa), ironwood (Olneya tesota), and mesquite (Prosopis spp.). Mojave Desert washes generally support desert peach (Prunus andersonii), desert almond (Prunus fasciculata), juniper (Juniperus californica), and desert willow (Chilopsis linearis). Also, some Salix spp. and Baccharis spp. are common in the Amargosa Canyon.

The plant species and wash situation are attractive to recreationists. This community is resistant to recreation vehicle damage because the washes are generally characterized by large, self-protecting plant species and wide, flat, sandy, unvegetated bottoms.

Sagebrush Scrub (approx. 1% of the desert area)

This community is represented by stands of big sage (Artemisia tridentata), low sage (Artemisia arbuscula), and blackbrush (Coleogyne ramosissima).

Occurrence is in far eastern and far western San Bernardino County, northeastern Kern County, and at higher elevations in the northern tip of the desert area. The sagebrush scrub is seldom important as a distinct plant community. It is typically an understory association included in the joshua tree and pinon-juniper woodland communities. The community occupies highly productive sites in terms of standing biomass. The site productivity increases at higher elevations as it is influenced by decreased temperature and precipitation. The vegetation in this community is capable of supporting the larger mammalian forms of wildlife and is one of the key habitat components of the mule deer.

The sagebrush scrub community can be considered resistant to damage from recreation vehicles for the following reasons. The community occupies higher elevation sites with steep, often rocky slopes that limit vehicular passage. The higher sites experience more precipitation than other desert areas; therefore, plants are dense enough to inhibit vehicular passage. The community is composed primarily of shrubby species which may pose a threat to vehicles by their use. The majority of the sites occupied by the sagebrush scrub are remote from the major population centers of southern California.

Within any of the discussed communities, there will be specific instances of factors which cause vulnerability in generally damage-resistant communities, or factors which lend resistance to normally vulnerable communities. These factors have been considered in the site evaluations. Criteria used for evaluating potential damage to the vegetative resource by recreation vehicle use includes the following:

1. Vulnerability of plant species by growth form, distribution, density and/or armament and probability for revegetation.

2. Vulnerability of individual sites by terrain, location, access and/or attractiveness to people.

3. Presence of rare, endangered or unique plant species.

4. Importance of plant species or plant communities to other vegetation dependent resources.

5. Tendency of vehicle operators to avoid natural obstacles which might damage person or vehicle.

RARE, ENDANGERED OR POSSIBLY EXTINCT

An inventory of rare, endangered or possibly extinct plants of California has been compiled by the California Native Plant Society. The information is current to June 30, 1971. Analysis showed that the distribution of 45 species and subspecies from the list includes Bureau of Land Management administered desert area. Knowledge of 5 additional species or subspecies was acquired from other sources, making 50 rare or endangered plant species or subspecies known to occur on Bureau of Land Management administered desert land. These are distributed as shown on the following list:

Area	Family	Species
1. Eureka Dunes	Cruciferae	Stanleya pinnata inyoensis
	Graminae	Ectosperma alexandrae
	Onagraceae	Oenothera deltoides eurekensis
2. North Saline	Compositae	Brickellia knappiana
	Compositae	Enceliopsis argophylla grandiflora
	Compositae	Haplopappus brickellioides
	Crassulaceae	Dudleya saxosa
	Cruciferae	Lesquerella kingii bernardina
	Cruciferae	Sibara rosulata
	Ephederaceae	Ephedra funerea
	Hydrophyllaceae	Phacelia mustelina
	Leguminosae	Astragalus cimae sufflatus
	Leguminosae	Lupinus holmgrenanus
	Polygonaceae	Eriogonum hoffmanii robustius
3. Saline-Panimint Valley	Compositae	Brickellia knappiana
	Compositae	Enceliopsis argophylla grandiflora
	Crassulaceae	Dudleya saxosa
	Cruciferae	Sibara rosulata
	Ephederaceae	Ephedra funerea
	Hydrophyllaceae	Phacelia mustelina
	Polygonaceae	Eriogonum hoffmanii robustius
6. Walker Pass/El Paso	Hydrophyllaceae	Phacelia nashiana
	Polygonaceae	Chorizanthe spinosa
7. Lone Tree Canyon	Hydrophyllaceae	Phacelia nashiana
	Polygonaceae	Chorizanthe spinosa
9. Jawbone Canyon	Hydrophyllaceae	Phacelia nashiana
	Polygonaceae	Chorizanthe spinosa
16. Calico/Coyote Lake	Compositae	Eriophyllum mohavense
	Leguminosae	Astragalus jaegerianus
	Leguminosae	Dalea arborescens
17. Amargosa Canyon	Scrophulariaceae	Cordylanthus tecopensis
	Capparidaceae	Oxystylis lutea

20.	Kingston Mts.	Rosaceae	Potentilla petallifera
		Scrophulariaceae	Penstemon stephensii
22.	Clark Mt.	Cruciferae	Lesquerella kingii bernardina
23.	Eastern Mojave	Amaryllidaceae	Androstephium breviflorum
		Cactaceae	Opuntia basilaris brachyclada
		Cruciferae	Lesquerella kingii bernardina
		Hydrophyllaceae	Phacelia nashiana
		Leguminosae	Astragalus cimae
		Liliaceae	Calochortus striatus
		Polemoniaceae	Linanthus arenicola
		Scrophulariaceae	Penstemon calcareus
39.	East Morongo	Leguminosae	Astragalus deanei
		Polemoniaceae	Linanthus maculatus
		Cactaceae	Mammillaria alversonii
40.	Whitewater	Leguminosae	Astragalus deanei
		Polemoniaceae	Linanthus maculatus
41.	Bighorn Mts.	Cactaceae	Opuntia basilaris brachyclada
		Compositae	Erigeron parishii
		Scrophulariaceae	Cordylanthus bernardinus
42.	Grapevine	Cactaceae	Opuntia basilaris brachyclada
		Scrophulariaceae	Cordylanthus bernardinus
43.	Desert Lily	Liliaceae	Hesperocallis undulata
48.	Big Chuckwalla	Cactaceae	Mammillaria alversonii
		Labiatae	Salvia greatae
50.	Orocopia Foothills	Labiatae	Salvia greatae
51.	Orocopia Mts.	Labiatae	Salvia greatae
55.	Santa Rosa Mts.	Rosaceae	Ivesia callida
		Compositae	Hemizonia mohavensis
		Cruciferae	Caulanthus simulans
		Euphorbiaceae	Ditaxis californica
		Euphorbiaceae	Acalypha californica
		Labiatae	Salvia eremostachya
		Sterculiaceae	Ayenia compacta
		Pteridaceae	Cheilanthes parishii
		Ranunculaceae	Delphinium parishii subglobosum
56.	San Felipe/Superstition Hills	Euphorbiaceae	Argythamnia adenophora
		Boraginaceae	Cryptantha ganderi
		Leguminosae	Astragalus magdalenae

59.	Coyote Mt.	Compositae	Machaeranthera cognata
		Labiatae	Salvia eremostachya
		Sterculiaceae	Ayenia compacta
		Rafflesiaceae	Pilostyles thurberi
		Ranunculaceae	Delphinium parishii subglobosum
62.	Davies Valley	Polemoniaceae	Linanthus bellus
		Compositae	Machaeranthera cognata
		Labiatae	Salvia eremostachya
		Sterculiaceae	Ayenia compacta
		Rafflesiaceae	Pilostyles thurberi
		Ranunculaceae	Delphinium parishii subglobosum
66.	Imperial Dunes	Leguminosae	Astragalus magdalenae
67.	East Mesa	Polygonaceae	Eriogonum deserticola

2. Wildlife. Each segment of the total desert biota plays some essential part of a self-sustaining organization of plants and animals, and the habitat quality determines relative abundance or scarcity of a species. Habitat quality can be judged by the welfare of its native inhabitants. Significant declines in animal populations indicate a habitat maladjustment. Man's influence is being felt desert-wide. Because native species have evolved and adapted to the desert environment over geologic time, free from man's influence, it is assumed that recreation vehicle use in off-road areas will have a detrimental affect on the ecosystem; degree of impact is now the question.

In planning for use of the desert resources, man must recognize that a certain dependence on other living things is a matter of survival. Use of the wildlife resource cannot proceed beyond the point that will ensure productivity to benefit future generations.

Since the wildlife role in the desert ecosystem is interrelated with the other living components, it is necessary to keep impacts at a minimum to prevent any irretrievable loss of the resource. The ratings used in evaluating the various sites reflect the potential impact of vehicular use and related activities on the desert's living components.

Wildlife Population

Generally speaking, animal population dynamics are the same in principle in the desert as in any animal population. There are however, certain unique adaptative qualities that are present in desert populations. Any animal population will evolve to meet the requirements imposed by its environment. In the desert certain species are favored over others. Reptile and rodent populations make up the bulk of the vertebrate biomass. There are very few large mammals and few birds. Small size is an adaptative characteristic enabling an animal to survive by burrowing, living on reduced amounts of food, etc. Small rodents are quite prolific as well. A rapid generation "turnover" results in more rapid evolutionary adaptation to an environment. The desert also favors reptilian species that are dependent on higher ambient temperatures to remain active. There are more of a variety of reptiles in the desert regions than in adjacent mountains or coastal areas.

Desert populations are mainly cyclic - remaining at a low subsistence level during periods of external stress - then responding to optimum environmental conditions (increased food, etc.) by an increase in numbers. The desert is not unique in this but it is more striking than in other areas. The desert stocking rate or the number of animals per acre, is also somewhat less than in adjacent areas because of the limiting environmental conditions such as food, cover, water, etc.

Bird populations are lower in desert regions than in the immediately adjacent areas. Seed eating birds are necessarily fewer because of the lack of abundant food and a necessity for free water. Insectivores do not need the amount of free water as do seed eaters. They are better

adapted to the desert environment but they are fewer in number. Adaptation then, seems to be the key to the desert uniqueness. The environment here favors species that can show adaptative qualities that enable them to cope with the harsh climate and adverse habitat conditions. Some of the adaptations include a nocturnal habit, a summer or diurnal estivation period, burrowing, certain physiological adaptations, a very restricted microhabitat, etc. Specific examples of these unique adaptations include the following:

1. Nocturnal Habit. A nocturnal habit has been evolved to avoid the climatic stresses of the intense daytime heat of the desert. Many reptiles and rodents, in fact the bulk, are nocturnal. In turn, the larger predatory mammals are also nocturnal. This nocturnal habit permits animals to avoid the intense climatic stresses found during the day in the regions.

2. Estivation. Certain animals such as the Mojave ground squirrel and the desert tortoise, are active only during low stress periods. The balance of the year is spent underground in a semi torpid condition which conserves energy and allows the animal to survive during periods of climatic and environmental stress.

3. Burrowing. Nearly all of the smaller animals and some of the larger (badger, fox) create microhabitats in the form of dens or burrows into which they can retreat during inactive periods. While this is certainly not unique to the desert ecosystem, it is here in the desert that one finds the use of burrows and dens for other than escape or reproductive shelter. The burrows and dens are a microhabitat used to avoid the harsh climatic conditions found during diurnal periods in this ecosystem.

4. Physiological Adaptations. In some animals physiological adaptations have evolved which will allow the animal to more fully utilize its habitat. Examples of this are the kangaroo rat which has developed a water conserving kidney that enables the animal to live its life using only the water found in dry seeds and grasses and never having to take a drink of free water. The desert pupfish has evolved in a highly saline situation and has developed a salt balance mechanism which allows it to live in this situation. Its body eliminates excessive salts in the blood stream which would be fatal to other fishes.

5. Restricted Habitats. Many desert species are highly stenoecious, that is, restricted to a narrow range of habitat. Animals such as the fringe toed lizard and desert kangaroo rat, for example, live only in sandy areas; while the chuckwalla or canyon mouse is seldom found far from a rocky environment. This type of restricted adaptation to a very narrow habitat range enables an animal to coexist with other animals in the general area, yet not directly compete with other animals for food or cover.

6. Threatened Species. The California desert's various habitats support a number of animals that are considered "threatened" to some degree. Threatened categories include species that are isolated, depleted, or on the periphery of their range - as well as those that are

rare or endangered. The species in this category include eleven mammals, twelve birds, two amphibians, 15 reptiles, and 3 fish. A complete listing can be found by consulting the following references:

1. BSFW - "Threatened Species of the United States - 1973 ed."

2. BLM - "Threatened Species of the Riverside District" - 1972 (unpublished).

3. Calif. Dept. Fish & Game - "At the Crossroads" - 1972

Birds

There are many species of birds that make the deserts of California home during some part of the year. Some are migrants, others are visitants during summer or winter, and some are residents. Most birds are quite mobile and recreation vehicle impact is not significant except during nesting periods and especially on ground nesting species. These follow:

Species	Habitat Occupied
Turkey Vulture - *Cathartes aura*	A bird of the open sky - carrion feeder. May nest on ground.
Sage Grouse - *Centro cercus urophasianus*	A ground nester in sagebrush areas of Inyo/Mono Counties.
California Quail - *Lophortyx californicus*	Ground nester; brushy draws and washes of high desert; desert side coastal mountains. Near water source.
Gambel's Quail - *L. gambelii*	Brushy thickets throughout desert; near permanent water source; ground nesting.
Chuckar - *Alectoris graeca*	Scattered locations in Mojave desert; nest on brushy slopes of desert mountains.
Mourning Dove - *Zenaidura macroura*	Nests on ground or in bushes desert wide in scattered localities; more common near water source.
Roadrunner - *Geococcyx californianus*	Desert wide; washes, flats, creosote scrub to Pinyon juniper; nests in low bushes.
Burrowing Owl - *Speotyto cunicularia*	In scattered locations desert wide where soil is suitable for burrows. Uses discarded rodent burrows.

Lesser Nighthawk - _Chordeiles acutipennis_	In gravelly washes, mountain slopes, open scrub; nest on open ground, relies on camouflage.
Horned Lark - _Eremophila alpestris_	Sparse flats and desert plains; nests in grass-lined ground depression.
Verdin - _Auriparus flaviceps_	In brushy desert valleys with creosote, mesquite, etc. Nests low in bushes.

MAMMALS

SPECIES	REMARKS	COMMON IN
Rocky Mountain Mule Deer *Odocoelius hemonius*	Providence Mts. N.	Sagebrush scrub, Pinyon-Juniper Woodland, Oak Woodland
Southern Mule Deer *O. h, fulginatus*	E. San Diego Co. Upper desert slopes	Sagebrush scrub, Pinyon-Juniper Woodland, Oak Woodland
Inyo Mule Deer *O. h. inyoensis*	Inyo Co. & North	Sagebrush scrub, Pinyon-Juniper Woodland, Bristle Cone
Calif. Mule Deer *O. h. californicus*	Tehachapi & San Berdo Mts. only	Sagebrush scrub, Pinyon-Juniper Woodland, Live Oak Woods
Burro Deer *O. h. eremicus*	Colo. desert washes Colo. river riparian	
Desert Bighorn *Ovis canadensis nelsoni*	May occur in many assoc. within habitat	Palm Oasis, Desert Slope Chaparral
Peninsular Bighorn *O. c. cremnobates*	Santa Rosa Mts. S. to Baja in Mts.	Palm Oasis, Desert Slope Chaparral
Inyo Shrew *Sorex tenellus*	Upper Sonoran Zone Inyo Co., East Cal.	Sagebrush scrub
Gray Shrew *Notiosorex crawfordi*	Arid brushy areas nowhere common	
CA Leaf Nosed Bat *Macrotis californicus*	All habitats from Riverside Co. S. through desert	
Long-Tongued Bat *Choeronycterus mexicana*	Desert slopes of E. San Diego Co.	Riparian, Oak Woodland
CA Myotis *Myotis californicus*	Throughout desert in all associations	
Small-Footed Myotis *Myotis subulatus*	Arid uplands; Mts. of Inyo & Mono Co.	Sagebrush scrub, Pinyon-Juniper Woodland, Desert Slope Chaparral
Hairy-winged Myotis *Myotis volans*	Providence/NY Mts. Only	Sagebrush scrub, Pinion-Juniper Woodland
Fringe-tailed Myotis *Myotis thysanoides*	Providence/NY Mts.	Sagebrush scrub, Pinyon-Juniper Woodland Bristle Cone

SPECIES	REMARKS	COMMON IN
Yuma Myotis *Myotis yumanensis*	Riparian Woodland Along Colo. River	Riparian
Arizona Myotis *Myotis arizonicus*	Riparian & washes Adj. to Colo. River	Riparian
Western Yellow Bat *Lasiurus ega*	Coachella Valley S. Into Mexico	
Hoary Bat *Lasiurus cinereus*	Found throughout desert small numbers migratory	
Big Brown Bat *Eptisicus fuscus*	Found through desert in upland regions hibernates	
Western Pipistrelle *Pipistrellus hesperus*	Desert wide, all areas and associations	
Spotted Bat *Euderma maculata*	In desert regions E. CA to Oregon, very rare	
Pallid Bat *Antrozous pallidus*	Most common near old bldgs. frequents brush	
Lump-Nosed Bat *Plecotus townsendii*	In caves known from around Mitchell's Caverns vicinity	
Brazilian Free-Tailed Bat *Tadarida brasiliensis*	Desert wide around water and wash areas	
Pocketed Free-Tailed Bat *T. femorosacca*	In Colorado Desert, all associations	
Big Free-Tailed Bat *T. molossa*	Upland areas of both deserts	
Western Mastiff Bat *Eumops perotis*	Occurs along Colo. River & E. San Diego County	
Black-tailed Hare *Lepus californicus*	All communities throughout desert	
Audubon Cottontail *Sylvilagus auduboni*	Brushy areas and canyon bottoms	Oak Woodland, Desert Slope Chaparral
Brush Rabbit *S. bachmani*	Chapparal dwellers occurs desert slope E. San Berdo Mts.	Oak Woodland
Pigmy Rabbit *S. idahoensis*	In sagebrush areas Inyo County North	Sagebrush scrub

SPECIES	REMARKS	COMMON IN
Antelope Ground Squirrel Ammospermophilis leucurus	Common on rockier soils desert wide	High Desert Creosote Low Desert Creosote Alakali Sink
Mojave Ground Squirrel Citellus mohavensis	Rare, habitat restr. to sandy soil, HD	
Round-tailed Gr. Squirrel Citellus tereticaudus	Sandy areas of hottest driest desert valley	Alkali
Rock Squirrel Otospermophilis variegatus	Around rock piles in Providence/NY Mts. only	Pinyon-Juniper Woodland
Merriam Chipmunk Eutamias merriami	Chaparral & desert slope, E. San Berdo Mountains	Pinyon-Juniper Woodland
Panamint Chipmunk E. panamintinus	Kingston, Clark & NY Mts. only, North to Inyo County	Pinyon-Juniper Woodland
Northern Flying Squirrel Glaucomys sabrinus	May occur on BLM at edge of San Berdo Mts. on N. and E. Slope	
Botta Pocket Gopher Thomomys bottae	In all but the driest parts of the desert	
Little Pocket Mouse Perognathus longimembris	Firm gravel soil area of high desert	Mojave Desert Wash
Bailey Pocket Mouse P. baileyi	Chiefly rocky slopes of coast range, East side	Desert Slope Chaparral
San Diego Pocket Mouse P. fallax	Sandy, open, weedy places E. San Diego County	
Spiny Pocket Mouse P. spinatus	Rough, hot desert Coachella Valley & South	Low Desert Creosote
Long-Tailed Pocket Mouse P. formosus	Frequents rocky desert canyons, gravel aluvium	High Desert Creosote Desert Slope Chaparral
White-Eared Pocket Mouse P. alticolus	Adj. to Tehachapi & San Berdo Mts. only	Joshua Tree

SPECIES	REMARKS	COMMON IN
Great Basin Pocket Mouse *P. parvus*	Extreme E. Calif. above 3000 feet	Sagebrush scrub Pinyon-Juniper Woodland
Yellow-Eared Pocket Mouse *P. xanthonotis*	E. slope Tehachapi Mts. only (Kelso Valley area)	
Desert Pocket Mouse *P. penicillatus*	Desert Valley floors sandy areas (not dunes)	Low Desert Creosote
Panamint Kangaroo Rat *Dipodomys panamintinus*	Common around gravelly flats/Joshua trees	Joshua Tree Pinyon-Juniper Woodland
Merriam Kangaroo Rat *D. merriami*	Widespread below 2500' both deserts	High Desert Creosote Low Desert Creosote Desert Slope Chapparal
Great Basin Kangaroo Rat *D. microps*	P-J Sagebrush areas E. California	Sagebrush scrub Shadscale scrub Pinyon-Juniper Woodland
Desert Kangaroo Rat *D. deserti*	Areas of drifting sand, dune edges	Shadscale scrub
Pallid Kangaroo Mouse *Microdipodops pallidus*	Fish Lake Valley, Inyo Co. only	Shadscale scrub Alkali Sink
Western Harvest Mouse *Reithrodontomys megalotis*	Grassy areas adj. to springs, Mt. Basins	
Canyon Mouse *Peromyscus crinitus*	Rocky places on desert Mts. above 3000' elev.	
Cactus Mouse *P. eremicus*	Arid valleys, cactus stands, etc.	
Brush Mouse *P. boylii*	Brushy areas, all but low hot parts of desert valleys Hi Desert Rt.	
Pinyon Mouse *P. truei*	Mts. E. San Berdo Co. into E. Inyo County	Pinyon-Juniper Woodland
White-Footed Deer Mouse *P. maniculatus*	Nearly all areas & communities. Abundant in brushy areas	
Southern Grasshopper Mouse *Onychomys corridus*	Nocturnal, insect-arthropodivorous Grassy areas in all communities.	

SPECIES	REMARKS	COMMON IN
Hispid Cotton Rat _Sigmodon hispidus_	Cattail/marshes along Colorado River	Riparian
White-Throated Wood Rat _Neotoma albigula_	Mesquite patches, S. Colorado Desert	Low Desert Creosote Alkali Sink
Desert Wood Rat _N. lepida_	Common	Sagebrush scrub, Pinyon Juniper Woodland Bristle Cone Pine
Muskrat _Ondatra zibethica_	Common along canals & ditches, Imperial Valley	Aquatic
Montane Meadow Mouse _Microtus montanus_	Near springs & areas of green grass, Mts. E. Inyo/Mono Counties Reported Clark Mt. area	
Sagebrush Vole _Lagurus curtatus_	Mts. of Inyo/Mono Counties	
Norway & Black Rats _Rattus spp._	Introduced; not too prevalent in desert; Garbage dumps & human habitation	
House Mouse _Mus musculus_	Fields & buildings around human habitation	
Porcupine _Erethizon dorsatum_	Mts. of Inyo Co., Providence/NY Mts., San Berdo & Tehachapi	
Desert Kit Fox _Vulpes macrotisarsipus_	Common in all desert areas, especially sandy dune edges, washes	Sagebrush scrub, shadscale scrub, High Desert Creosote, Low Desert Creosote, Joshua Tree, Mojave Desert Wash
Gray Fox _Urocyon cinereoargenteus_	Frequently above Creosote Valleys 3000' elev. m/l	Pinyon-Juniper Woodland
Coyote _Canis latrans_	Ubiquitous	Sagebrush scrub, high Desert Creosote, Joshua Tree, Pinyon-Juniper Woodland, Mojave Desert Wash, Colorado Desert Wash, Palm Oasis, Riparian, Live Oak Woodland, Desert Slope Chaparral, Bristle Cone Pine

SPECIES	REMARKS	COMMON IN
Raccoon _Procyon lotor_	Colo. River and Agricultural in Imperial Valley	
Ringtail Cat _Bassariscus astutus_	Canyon, rock, brush areas, mts., foothill	
Long-Tailed Weasel _Mustela frenata_	Occurs on desert slope, not interior	Sagebrush scrub Live Oak Woods
Badger _Taxidea taxus_	Found in nearly all areas	Sagebrush scrub, Joshua Tree, Pinyon-Juniper Woodland, Mojave Desert Wash, Live Oak Wood, Desert Slope Chaparral
Striped Skunk _Mephitis mephitis_	Desert Slope and Colo. River - not desert	Sagebrush scrub, Pinyon-Juniper Woodland, Live Oak Wood
Spotted Skunk _Spilogale putorius_	Rocky, brushy places Mts. & Colo. River	Sagebrush scrub, Pinyon-Juniper Woodland, Desert Slope Chaparral
Mountain Lion _Felis concolor_	Larger Mt. areas esp. Inyo Co. Yuma lion in rare category	
Bobcat _Lynx rufus_	Brushy, rocky places, found desert wide	Sagebrush scrub, Joshua Tree, Pinyon-Juniper Woodland, Mojave Desert Wash, Colo. Desert Wash, Palm Oasis, Live Oak Wood, Desert Slope Chaparral
Feral Burro _Equus asinus_	Introduced; spread into many locations	Sagebrush scrub, Shadscale scrub, High Desert Creosote Low Desert Creosote, Joshua Tree, Mojave Desert Wash, Colo. Desert Wash, Riparian Desert Slope Chaparral
Tule Elk _Cervus nannodes_	Owens Valley, may occur in Desert Study area	
Pronghorn _Antilocapra americana_	Herds of antelope were reported from the southeastern edge of the California Desert as late as 1940's. A small herd of Sonoran pronghorn recently discovered near Lake Havasu, AZ. Believed extirpated from CA Desert Ranges. Possibility for reintroduction in some areas	

REPTILES - AMPHIBIANS

SPECIES	HABITAT OCCUPIED
Pacific Treefrog Hyla regila	Riparian, Aquatic
Western Toad Bufo boreas	Riparian, Aquatic
Red Spotted Toad Bufo punctatus	Riparian, Aquatic (desert)
Desert Tortoise Gopherus agassizi	Desert valleys and washes in many habitat associations
Banded Gecko Coleonyx variegatus	Rocky areas in variety of habitat from Creosote to Pinyon-Juniper. Occurs in Imperial Dunes
Desert Iguana Dipsosaurus dorsalis	Creosote scrub w/sandy soils; also bajadas, washes, rocky streambeds
Chuckwalla Sauromalus obesus	Creosote scrub w/rocky outcrops, lava flows, canyons
Zebra-Tailed Lizard Callisaurus draconoides	Many plant associations where open ground, desert pavement, etc. allow for running. Creosote, shadscale, washes, etc.
Colorado Fringe-Toed Lizard Uma notata	Creosote scrub; restricted to areas of loose sand, washes, flats, dunes, that have scant vegetation
Coachella Fringe-Toed Lizard Uma inornata	Same as above - range limited to Coachella Valley
Mojave Fringe-Toed Lizard Uma scoparia	Same as above - range north of other species
Collared Lizard Crotaphytus collaris	Many habitat associations in rocky gullies, mt. slopes, alluvial fans
Leopard Lizard Crotaphytus wislizenii	Creosote to Sagebrush scrub, areas of sparse vegetation, fast runner, predator
Desert Spiny Lizard Sceloporus magister	Many associations include Creosote, Pinyon-Juniper, Joshua Tree, Shadscale, etc. along washes & river courses. Frequents rocky crevices, trees; good climber

SPECIES	HABITAT OCCUPIED
Granite Spiny Lizard *Sceloporus magister*	Upper slopes of desert side of of coastal mts. into Chaparral areas; prefers rocky canyons, Palm Oasis
Western Fence Lizard *Sceloporus occidentalis*	Absent from extreme desert but occurs on edges in variety of habitats, canyons, oak bottoms, near old buildings, etc.
Side Blotched Lizard *Uta stansburiana*	Ground dweller in variety of habitats, sand, rocks, washes, etc. in many veg. associations
Long-Tailed Brush Lizard *Urosaurus graciosus*	Creosote scrub, washes, areas of loose sand and scattered vegetation
Tree Lizard *Urosaurus ornatus*	Riparian habitat along lower Colorado River
Small-Scaled Lizard *Urosaurus microscutatus*	East San Diego County in rocky habitats, washes, canyons
Banded Rock Lizard *Streptosaurus mearnsi*	Desert slope of coast mts., not in desert interior; habitat is rocky areas of canyons, often in narrowest shadiest parts
Desert Horned Lizard *Phrynosoma platyrhinos*	In or near sandy soil in Creosote, shadscale and to sagebrush zones
Flat-Tailed Horned Lizard *Phrynosoma m'calli*	Areas of fine sand w/vegetation sparse or lacking, similar fringe-toed lizard
Granite Night Lizard *Xantusia henshawi*	Secretive crevice dwelling species of shady rocky canyons on desert slopes of coast ranges, especially on north slopes and near live water
Desert Night Lizard *Xantusia vigilis*	Joshua tree woodland, Pinyon-Juniper, desert chapparal areas, under fallen logs and debris
Western Skink *Eumeces skiltonianus*	Prefers rocky hillsides with abundant plant cover near live water, only on higher slopes of desert side of coast ranges
Gilbert's Skink *Eumeces gilberti*	Isolated populations on some desert mountains, habitat generally same as Western Skink

SPECIES	HABITAT OCCUPIED
Western Whiptail *Cnemidophorus tigris*	Nearly all habitats where vegetation is sparse and open areas for running
Southern Alligator Lizard *Gerrhonotus multicarinatus*	Desert slopes of coast ranges, oak, bottoms, canyons, near live water, along Mojave River
Panamint Alligator Lizard *Gerrhonotus panamintinus*	Known from mts. of E. Inyo County in thickets of willow along stream courses or on brushy creosote hillsides
California Legless Lizard *Anniella pulchra*	Desert outpost at Whitewater, Riverside Co., burrows in loose soil
Gila Monster *Heloderma suspectum*	Known from localities in Clark and Providence Mts. only. Inhabits outwash plains and lower mt. slopes in rocky, brushy areas
Western Blind Snake *Leptotyphlops humilis*	Canyon bottoms or washes in vicinity of springs or semi-permanent water, favors rocky areas with loose soil for burrowing
Rosy Boa *Lichanura trivirgata*	Likes rocky, brushy areas near oases or permanent water, not restricted to it, distribution tho desertwide is spotty
Spotted Leaf-Nose Snake *Phyllorhynchus decurtatus*	Creosote scrub with sandy or gravely soil, open desert valleys and plains, burrower
Red Racer *Masticophis flagellum*	Diurnal species found in many desert habitats, rocky, brushy washes and alluvial fans are favored
Striped Racer *Masticophis lateralis*	Chiefly a chaparral dweller, may occur on desert slopes of coast ranges
Western Patch-Nosed Snake *Salvadora hexalepis*	Creosote plains and lower mt. slopes, shadscale scrub and desert valleys, occurs to sagebrush zone in desert mts.
Glossy Snake *Arizona elegans*	Habitat varies from barren desert flats to pinyon-juniper woodland, prefers open areas where ground is sandy or loamy with scattered rocks, burrows during the day

SPECIES	HABITAT OCCUPIED
Gopher Snake Pituophis melanoleucus	Various subspecies found in variety of desert habitats, inactive during hottest weather
Common Kingsnake Lampropeltis getulus	Likes rocky outcrops, debris, clumps of vegetation in variety of habitats from desert valleys to coniferous forest and swampland
Long-Nose Snake Rhinocheilus lecontei	Creosote desert valleys especially near irrigated lands, nocturnal, a daytime burrower
Checkered Garter Snake Thamnophis marcianus	In California only along lower Col. River and adjacent ponds and backwaters and may occur at desert edge or in washes adjacent to irrigated farmland
Western Ground Snake Sonora semiannulata	Sandy flats and washes, mesquite hummocks, rocky hillsides with loose soil, Col. desert habitats to sagebrush plains, along lower Col. River in thick riparian areas
Western Shovel-Nosed Snake Chionactis occipitalis	Creosote valleys, washes, and dunes, or rocky hillsides with sandy pockets, vegetation scant
Western Black Headed Snake Tantilla planiceps	Three subspecies occur in variety of habitats from low desert to higher mt. slopes, Creosote, Joshua Tree, Chapparal, washes, rocky hillsides, very secretive
California Lyre Snake Trimorphodon vandenburghi	Desert slopes of coast ranges, a rock dweller, preferring areas of massive rocks with deep crevices to hide in, on mesas and lower mt. slopes
Sonora Lyre Snake Trimorphodon lambda	S.E. California, rocky canyons and hillsides with good vegetation, good climber
Night Snake Hypsiglena torquata	Variety of habitats from Creosote Valleys to Joshua Tree Woodland, in rocky and sandy areas, nocturnal
Western Diamondback Crotalus atrox	Desert brushlands, washes, rocky canyons, mountain slopes, riparian
Red Diamondback Crotalus ruber	Rocky brushlands on desert side of coastal mts., Mesquite and cactus thickets are favored, rocky alluvial fans on lower slopes

SPECIES	HABITAT OCCUPIED
Speckled Rattlesnake Crotalus mitchelli	Mt. slopes, brushland to Pinyon-Juniper, rocky buttes, desertwide at med.-high elevations
Sidewinder Crotalus cerastes	Commin in sandy valleys with sparse creosote or mesquite, dunes, washes, near rodent burrows
Western Rattlesnake Crotalus viridis	Variety of habitats, in our desert only on higher desert slopes of coastal mts.
Mojave Rattlesnake Crotalus scutulatus	Higher desert areas, Joshua Tree Woodland, brushy hillsides, grassland, washes, not common in areas of dense veg.
Western Pond Turtle Clemmys marmorata	Mojave River, irrigated areas
Spiny Softshell Turtle Trionyx spiniferus	River turtle, introduced into Lower Col. Imperial Valley canals, New River, Alamo
Sonora Mud Turtle Kinosternon sonoriense	Lower Col. River System, Riparian
Desert Slender Salamander Batrachoseps aridus	Known only from Deep Canyon, Riverside County
Couch's Spadefoot Toad Scaphiopus couchi	Creosote desert washes of S.E. desert, relatively rare, burrows during drought
Great Basin Spadefoot Scaphiopus intermontanus	Sagebrush & Pinyon-Juniper areas in Inyo and Mono Counties, East of Sierras
Colorado River Toad Bufo alvarius	Riparian areas, Lower Col. River and irrigated area adjacent
Arizona Toad B. microscaphus	Willow thickets along washes & arroyos in isolated parts of E. Mojave desert, near permanent water
California Treefrog Hyla californiae	Rocky Canyons along permanent streams where some shade, W. fringe of desert at oases and springs
Leopard Frog Rana pipiens	Marshes, creeks, springs in isolated areas of S.W., occurs in San Felipe Creek

Wildlife Impact Scenario

What is the effect of intense recreation vehicle use on the creosote bush community? Perhaps the most common habitat association is the creosote bush scrub. This association is found desert-wide, and many of the broad desert valleys contain this habitat and little else. As it turns out, many of the more popular recreation vehicle areas and many of the "open" areas are located principally within this habitat association. There have been no studies or formal research to date, but by observation and intelligent guesswork, a potential impact can be surmised.

Take, for example, a broad creosote-dominated valley in the high desert. It is perhaps 20 miles long by 5 miles wide with a major wash system draining it. There are two or three definite soil types. The living components of this small system could conceivably include the following plants and animals common to a creosote scrub community in the Mojave Desert of California:

Plants

Creosote Bush
Saltbush
Catclaw
Ratany
Bur Sage
Peach Thorn
Spanish Dagger
Cholla
Galleta Grass
Cheesebush
Sandpaper Plant
Sage
Brittlebush
Horsebrush
Palo Verde
Mesquite
Joint Fir
Various ephemeral species

Reptiles

Desert tortoise
Desert iguana
Zebra-tailed lizard
Fringe-toed lizard
Collared lizard
Desert Spiny lizard
Long-tailed brush lizard
Desert horned lizard
Western whiptail
Red racer
Spotted leaf-nosed snake

Mammals

Coyote
Kit Fox
Bobcat
Spotted Skunk
Badger
Antelope Ground Squirrel
Pocket Mouse
Deer Mouse
Kangaroo Rat (2 spp.)
Cactus Mouse
Jackrabbit
Bats (various spp.)

Birds

Crissal Thrasher
House Finch
Turkey Vulture
Bullock's Oriole
Western Tanager
Lark Sparrow
Brewer's Sparrow
English Sparrow
Verdin
Cactus Wren
Raven
Sparrow Hawk
Gambel's Quail
Mourning Dove
Roadrunner
Horned Lark
LeConte's Thrasher

Reptiles	Birds
Patch-nosed snake	Red-tailed Hawk
Gopher snake	Loggerhead Shrike
Shovel-nosed snake	
Sidewinder	
Western diamondback	

It is recognized that a given segment of a creosote scrub habitat association would probably not contain all species mentioned, yet these species do occur in this type of environment - and they are potentially present.

A motorcycle race course, a four-wheel drive course, or just "play trails," through a typical creosote desert valley could have dimensions of about 20 feet wide by 5 miles long (26,400"). This closely approximates 12 acres of creosote habitat.

Twelve acres of this type could conceivably support the following living components:

700 - 850	plants
12 - 15	small rodents
25 - 30	various reptiles
5	birds
1	larger mammal

It is easy to see, even at this small scale, that some habitat disruption will occur from intensive ORV activity in this area. To be sure, many birds and reptiles are quite mobile and can move out of the way of a vehicle. Many nocturnal species are in burrows during daytime hours, however, and physical damage to these burrows could be fatal to occupants.

Many mammals, reptiles, and even birds exhibit strong territoriality. That is, they stake out a home range and will not tolerate others of the same species to come within their territory. When this territorial behavior is upset, especially during certain critical seasonal periods such as courtship and breeding, a significant short term impact on animal populations could occur. Also, in the desert many species are existing at the "limits" of their existence. That is, they are able to tolerate the high temperatures, lack of water, and harsh environment well enough, but an introduced stress factor could cause a fatal imbalance to occur. For example, if a lizard is active in temperatures to 110 degrees F. and is operating near the top of his "range", then is forced into prolong evasive tactics (running, no rest periods, etc.), the extra activity caused by stress could be all that was needed to induce over-stress and a fatality.

These are some examples of what could, and in some cases does, take place. Impacts are short term unless continued for a long period, in which case, they would result in a "sacrifice area" habitat condition for some species. This change of habitat condition could also result in an increase of less desirable species and a decrease of normal native inhabitants. Many of the small rodents and reptiles are quite prolific and initial disturbance

in a given small area can usually be repaired if allowed to do so. It is only continued intensive use over a given area that has the potential to create a "sacrifice area."

Some habitats are less sensitive to physical damage from recreation vehicle use because of terrain features or inaccessibility. Small segments, however, such as an eagle nest on a cliff, while not subject to physical damage could suffer from noise stress. Again, the degree of adverse impact is strongly seasonal.

Potential mitigating measures that can be taken to protect the wildlife resource have been discussed elsewhere. If these are considered when setting up race courses and open areas, damage to the resource will not cease, but it will be minimized to a level at which irretrievable losses should not occur. Studies should certainly be initiated into any plan to make certain that long term irretrievable impacts are not occurring.

C. ECOLOGICAL INTERRELATIONSHIPS

Knowledge of ecological relationships in the desert is limited for a variety of reasons. Emphasis upon application of ecosystem theory to management of entire ecosystems is a relatively recent development. Odum has said, "...Most applications of ecological principles prior to 1960 pertain to the management or control of specific resources or species, such as water, soil, timber, game, fish, crops, insect pests, etc. Now, in addition to these, application centers around the ecosystem, the totality of air and water cycles, productivity, food chains, global pollution, systems analysis and the control and management of man as well as of nature." (Odum, 1971.)

Ecosystems have often been altered with drastic consequences, without a clear understanding of ecological processes. This may be attributable to the historic context of western man's development and his perception of the relationship between man and the surrounding environment - that man has an imperative to subdue, rather than harmonize with his environment.

There has also been a lack of general foresight. When ecological relationships were considered, it was in the context of a linear cause-effect relationship, overlooking the reverberations of secondary and tertiary effects in the ecosystem; yet, prior to 1914, John Muir said, "If we take one thing out by itself we find it connected to everything else in the universe."

The effects of exponential growth have only recently been observed. At one time the automobile was probably an ecologically acceptable means of transportation in most places. The number of autos was not great enough to impair the environment's capacity to neutralize and assimilate pollutants. In some areas we now find that the assimilative capacity of the ecosystem has been exceeded. Our knowledge of ecosystem relationships, however, is insufficient to allow us to answer critical quantitative questions, such as: the level of pollution that can be neutralized, or the number of automobiles an area can support, without exceeding its assimilative capacity.

Until recently, the desert was perceived primarily as an obstacle and research was directed at areas of more immediate economic utility to man. Therefore, there is presently a lack of sufficient data to describe in quantifiable terms ecosystem relationships in the desert. However, we do know that present human population and uses of the desert are dependent upon importation of resources from other ecosystems. Without imported water, the desert's human population would certainly be much less. Nonrenewable resources, such as oil, are globally in limited supply. Therefore, recreation vehicle use may effect worldwide resource systems, and in turn may be affected by changes in these systems.

Generalized conclusions can be reached with respect to factors influencing the functions of desert ecosystems. But this consideration is complicated by the wide-ranging effects of man's use of the desert and lack of data needed to determine quantifiable relationships.

Limiting Factors

Biological productivity may be limited by a single factor at any one time. For instance, if the soil contains excessive salt, plants may not be able to fully utilize nitrates. Utilization of nutrients by plants may be limited by available moisture. Or, animal production may be limited since many desert animals obtain their moisture from vegetation. Factors limiting productivity may change over time. If, in the ecosystem considered above, a prolonged period of rainfall occurs, harmful salts may be leached deep into the soil, making them unrestricting to plants. Then nitrates may become limiting.

Limiting factors must be known in order to adequately assess the effects of different uses. No one, to our knowledge, has measured the precise effect of recreation vehicles on various soils and habitats during different periods of the year. We know enough, however, to identify some of the more pertinent questions regarding timing of impacts. For instance, creosote bush, one of the most widespread of desert plants, can carry on photosynthesis at soil moisture deficits of greater than minus 75 atmospheres moisture pressure. Most plants will wilt at 15 atmospheres. Obviously creosote bush is growing under certain stress when the moisture is very low. Would a recreation vehicle, by emitting gases near the plant, or by breaking part of the plant, or compacting the soil, have more affect on the creosote bush and other desert plants in the summer than during a time when the plants are actively carrying on photosynthesis (during the wetter months)?

Conditions of Existence as Regulatory Factors

The conditions of existence in the desert may determine its fragility more than the limiting factors, discussed above. The limiting factors apply primarily to plants and animals that have already adapted to the harsh environment of the desert. But the fact that there are no lush forests and seldom even chaparral is significant.

As Odum has stated, "The period of soil moisture utilization represents the principal period of primary production for the community as a whole and thus determines the supply of food available to the consumers and decomposers for the entire annual cycle." A figure from Odum's text book graphically depicts the potential evapotranspiration of a temperate deciduous forest, of chaparral, and of desert communities. (Figure 11.) Although the described desert community is in New Mexico, it does amply demonstrate that even though there may be some summer rain (summer rain is considerably less in California) the high summer temperatures and low relative humidity do not allow the plants to utilize that moisture. Therefore, growth in the desert may take place for a few weeks, or a month, but seldom more than two or three months per year.

Because of the limited growing season, very little of the precipitation falling in the desert is utilized by the plants and therefore, indirectly by the animals. Perhaps the abundant sunshine, and consequent high termperature, is the main regulatory factor in the desert. Even if we

DESERT WATER UTILIZATION

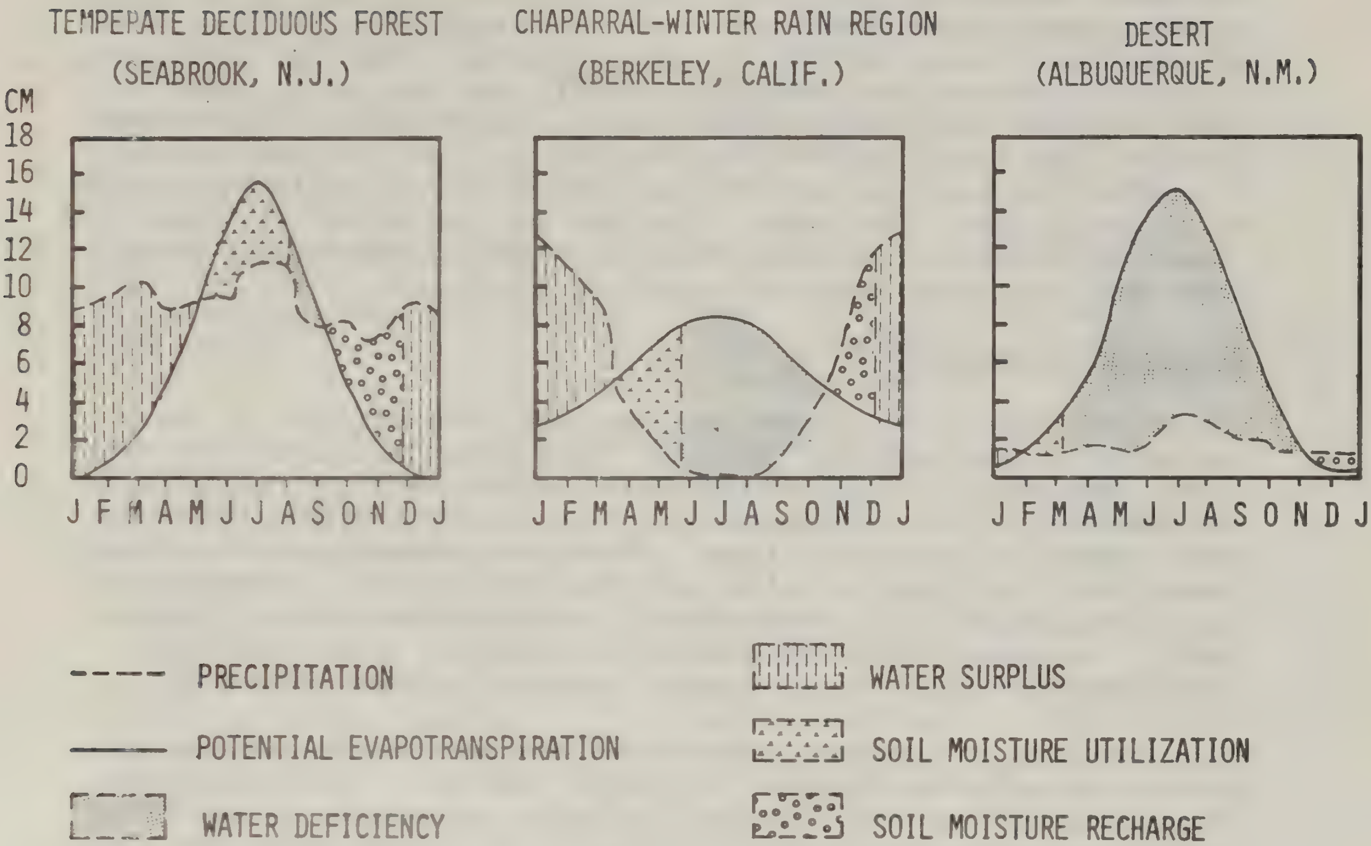


FIGURE 11: RELATIONSHIP BETWEEN RAINFALL AND POTENTIAL EVAPOTRANSPIRATION (EVAPORATION FROM SOIL PLUS TRANSPIRATION FROM VEGETATION) IN THREE LOCALITIES REPRESENTING THREE DISTINCTLY DIFFERENT ECOLOGICAL REGIONS. THE DOTTED AREA IN THE CHARTS ("WATER DEFICIENCY") INDICATES THE SEASON DURING WHICH WATER MAY BE EXPECTED TO BE A LIMITING FACTOR, WHEREAS THE VERTICAL EXTENT OF THIS AREA INDICATES THE RELATIVE SEVERITY OF THIS LIMITATION. (AFTER THORNTHWAITE, 1955.)

FROM ODUM, EUGENE P., FUNDAMENTALS OF ECOLOGY; THIRD EDITION, (SAUNDERS CO., PHILADELPHIA, 1971)

were to have more rainfall in the summer in the California Desert, the temperature and duration of sunshine would have to be less to allow the plants to utilize the increased moisture.

The desert may be becoming drier and drier. Hastings and Turner discuss a paired photographic comparison of changing vegetation patterns in the Arizona deserts over the past 50 years and more. (Hastings and Turner, 1972.) The photographs demonstrate clearly that many areas, which 50 years ago were grasslands, are now desert. Grasslands do require more moisture than desert shrubs. What has not yet been confirmed however, is whether the lower moisture availability is due to a changing climate or to some of man's influences. They are now continuing this study. If indeed the climate is becoming drier, then perhaps the impacts of man's activities may become even more severe in the future.

Ecological Succession

Ecological succession patterns are important considerations in the evaluation of environmental quality. Every ecosystem starts with few plants and animals, contains some unused niches, and food relationships are generally simple and linear. As the ecosystem evolves, it becomes more complex in its mature stages. McHarg has stated that this process leads toward desirable evolution and that anything that interrupts the succession process is a retrogression, and thus undesirable. (McHarg, 1969.) In understanding the process of ecological succession it is convenient to follow a tabular model developed by Odum (Figure 12).

Considerations of community energetics gives an indication of the total production and productivity of particular habitats. Total production is a measure of the total biomass, in plants and animals, a particular habitat can produce and sustain. Productivity, on the other hand, is a measure of annual increments of growth. The total production or standing crop biomass, including both animals and plants, is of course very low on the desert relative to other ecosystems (See Figure 13). Of course, various habitats in the desert produce more than others. A joshua tree woodland, for instance, produces considerably more than a creosote bush habitat.

Desert habitats differ from adjoining habitats because of low precipitation. The plant growth form is generally low and the plants are widely spaced. The desert plant communities are normally closed communities of widely spaced shrubs, with a generally sparse understory of grasses and forbs; above normal rainfall periodically opens them to an increase in herbaceous plant production. This increased production (which results in the much anticipated floral display on the desert) occurred in 1935, 1940 and 1947 (Went, and Westergaard, 1949). In more recent history, good production years were experienced in 1969 and 1973. These observations indicate that an overall good production year can be expected once in five years.

Field observations indicate that wildlife populations closely follow the vegetative pattern of cyclic high and low production. During periods of high vegetative productivity, wildlife populations expand to occupy much wider ranges or habitat areas than normal. As vegetative production returns to normal, animal populations decline, and the smaller more productive habitats, such as springs, seeps, and washes, maintain the largest

Figure 12. A Tabular Model of Ecological Succession: Trends to Be Expected in the Development of Ecosystems*

Ecosystem Attributes	Developmental Stages	Mature Stages
	Community Energetics	
1. Gross production/community	Greater or less than 1	Approaches 1
2. Gross production/standing crop biomass (P/B ratio)	High	Low
3. Biomass supported/unit energy flow (B/E ratio)	Low	High
4. Net community production (yield)	High	Low
5. Food chains	Linear, predominantly grazing	Weblike, predominantly detritus
	Community Structure	
6. Total organic matter	Small	Large
7. Inorganic nutrients	Extrabiotic	Intrabiotic
8. Species diversity-variety component	Low	High
9. Species diversity-equitability component	Low	High
10. Biochemical diversity	Low	High
11. Stratification and spatial heterogeneity (pattern diversity)	Poorly organized	Well organized
	Life History	
12. Niche specialization	Broad	Narrow
13. Size or organism	Small	Large
14. Life cycles	Short, simple	Long, complex
	Nutrient Cycling	
15. Mineral cycles	Open	Closed
16. Nutrient exchange rate, between organisma and environment	Rapid	Slow
17. Role of detritus in nutrient regeneration	Unimportant	Important
	Selection Pressure	
18. Growth form	For rapid growth ("r-selection")	For feedback control ("K-selection")
19. Production	Quantity	Quality

Figure 12 (continued)

Overall Homeostasis

20.	Internal symbiosis	Undeveloped	Developed
21.	Nutrient conservation	Poor	Good
22.	Stability (resistance to external perturbations)	Poor	Good
23.	Entropy	High	Low
24.	Information	Low	High

BIOLOGICAL COMMUNITY METABOLISM

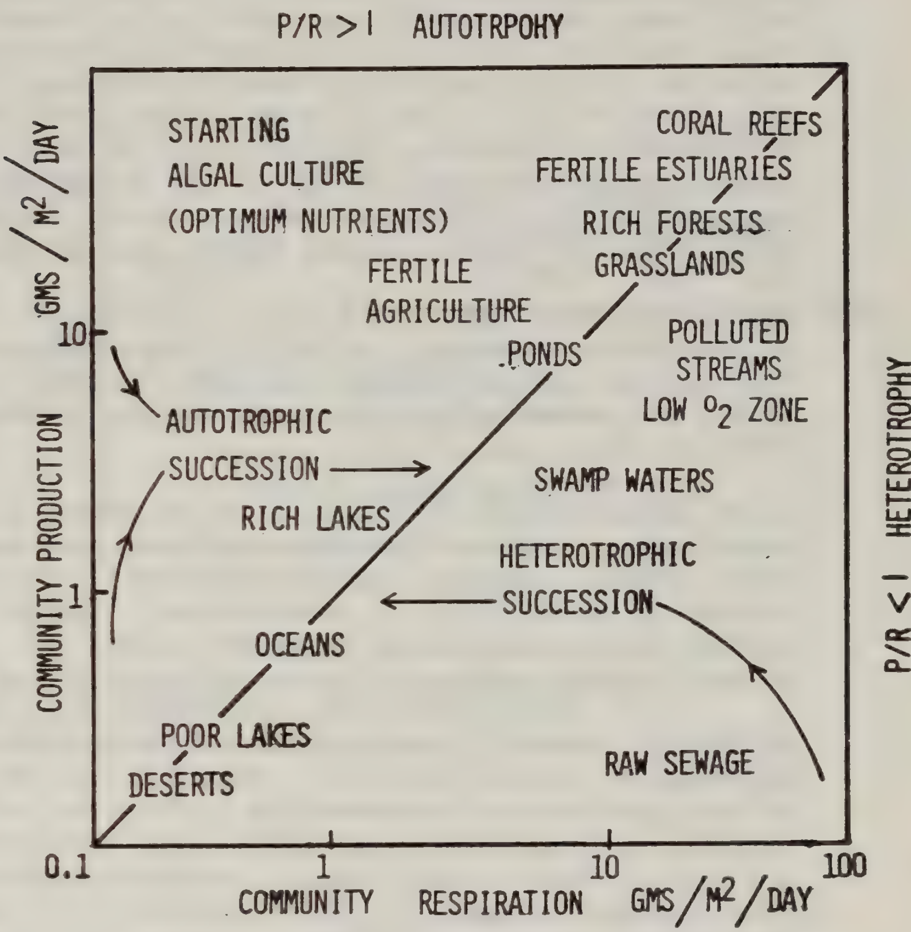


FIGURE 13: POSITION OF VARIOUS COMMUNITY TYPES IN A CLASSIFICATION BASED ON COMMUNITY METABOLISM. GROSS PRODUCTION (P) EXCEEDS COMMUNITY RESPIRATION (R) ON THE LEFT SIDE OF THE DIAGONAL LINE (P/R GREATER THAN 1 =AUTOTROPHY), WHILE THE REVERSE SITUATION HOLDS ON THE RIGHT (P/R LESS THAN 1 =HETEROTROPHY). THE LATTER COMMUNITIES IMPORT ORGANIC MATTER OR LIVE ON PREVIOUS STORAGE OR ACCUMMULATION. THE DIRECTION OF AUTOTROPHIC AND HETEROTROPHIC SUCCESSION IS SHOWN BY THE ARROWS. OVER A YEAR'S AVERAGE, COMMUNITIES ALONG THE DIAGONAL LINE TEND TO CONSUME ABOUT WHAT THEY MAKE AND CAN BE CONSIDERED TO BE METABOLIC CLIMAXES.

(REDRAWN FROM H.T. ODUM, 1956)

FROM: ODUM, EUGENE P., FUNDAMENTALS OF ECOLOGY, THIRD EDITION, (SAUNDERS CO., PHILADELPHIA, 1971)

and most diverse populations. Certain habitats have experienced such intensive vehicle use that significant vegetative damage has been suffered by some of the large self-protecting species. It is expected that where perrenial species are removed by disturbance that annual herbaceous species will invade to the capacity of the site to produce. Field observation has shown that mahy areas that have been subjected to heavy and repeated recreation use did not revegetate under the optimum climatic conditions prevailing in 1973. Similar areas, where pressure was as heavy but not as frequently recurring, did revegetate as expected (quantification and comparison of the levels of use on the Shadow Mountains and Fremont Peak areas might begin to bracket the capacity of certain soil-vegetation associations to sustain damage and recover naturally).

Some of the less extensive habitats such as the riparian-aquatic are both vulnerable and important habitats. These habitats are vulnerable because they attract recreationists, the soil involved is easily compacted, the plants are dense and the sites are habitat centers for a variety of wildlife species.

There are microhabitats that are little known, such as those of the soil fungi. Their soil binding qualities have been studied (Went and Stark, 1968). However, the overall significance of biological soil binding in desert soils is undetermined. Because biological soil binding takes place beneath standing plants and in the hummocks left by dead plants, vulnerability to vehicular damage should be low.

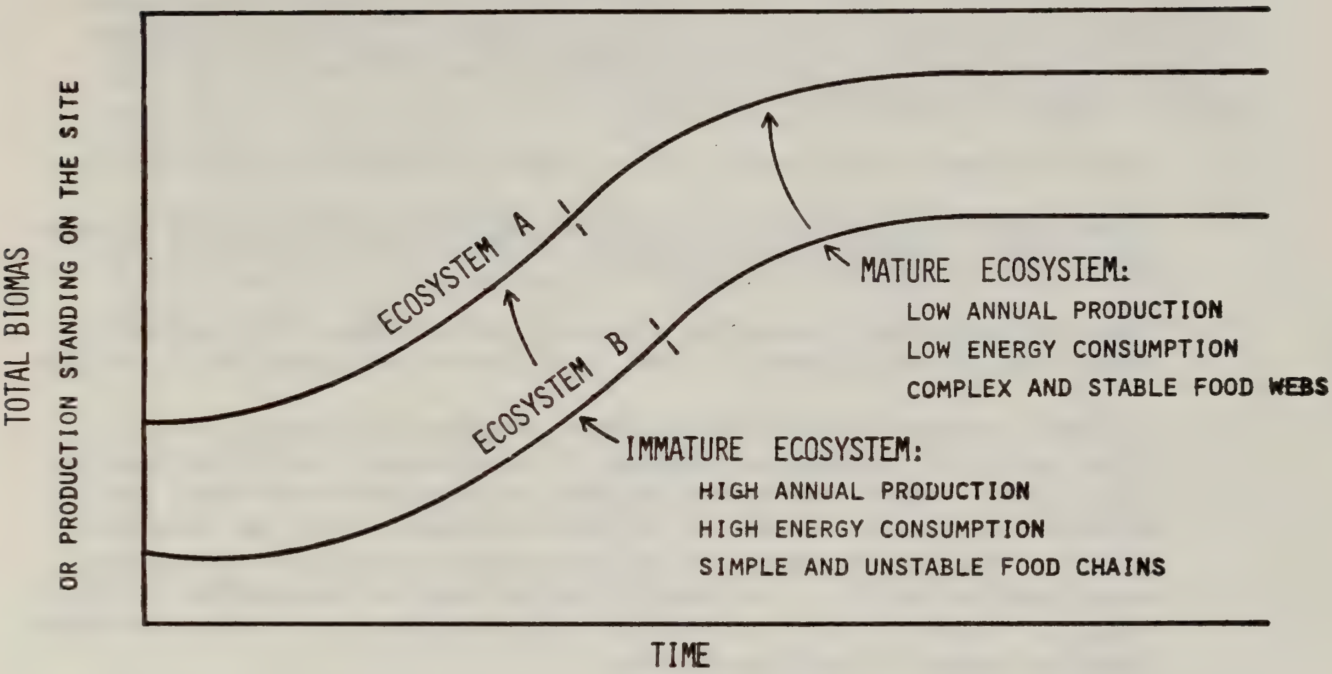
Biological community energetics can be graphically displayed on a sigmoid development curve (Figure 14). Mature ecosystems will be seen on the top of the curve whereas intermediate successional steps, or immature ecosystems, are represented at points along the curve. Different ecosystems will have different magnitudes of potential representing different curves. This concept is shown for two ecosystems (A and B) in Figure 14. The production-community development relationship can be affected by recreation vehicle use. In some cases, total production potential of the community may be changed (Figure 15).

Although the impacts, size of vehicles, and numbers of vehicles may be the same in both ecosystem A and ecosystem B, the impacts will have varying affects. In this example, ecosystem B was impacted more than A. In both cases, production potential was reduced and successional development will proceed at lower levels along the development curve. Ecosystem B would not recover to as great an extent as would A, but both ecosystems would have reduced potential. This would constitute an irreversible impact. If an impact only temporarily affects a stage of succession, no loss of potential would result but there would only be a shift along the development curve.

Unfortunately, the quantified relationship between production and time (represented by a point on the curve in Figure 14 and 15) is unknown in

BIOLOGICAL COMMUNITY ENERGETICS

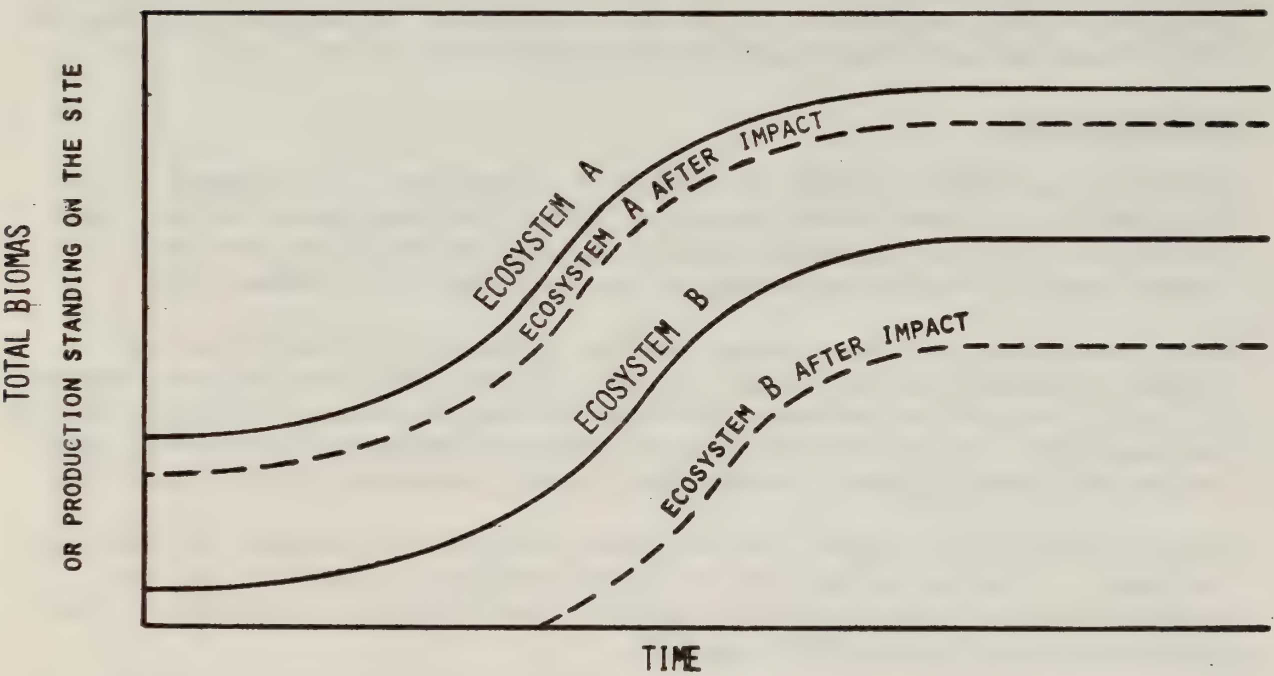
FIGURE **14**:



BIOLOGICAL COMMUNITY ENERGETICS

POTENTIAL RESULTS OF IMPACTS

FIGURE **15**:



NOTE: A REDUCTION IN SUCCESSION IS MOVEMENT ON THE SAME CURVE. THE DASHED - LINES INDICATE AN IMPACT THAT LOWERED THE POTENTIAL OF A RESOURCE OR ACTUALLY CAUSED AN IRREVERSIBLE IMPACT.

actual desert ecosystems. Using Odum's tabular model of ecosystem succession (~~Table~~ Figure 12), however, visual comparisons of various habitats can be made. It is essential to define the mature stage of development, to identify the characteristics stated in Figure 12. The implications of these characteristics of mature stages, as contrasted with developmental stages of ecosystems includes:

- Mature stages require very little energy to remain in equilibrium.

- Diversity of species is high and the area is likely to be of greater visual and interpretive interest.

- Mineral cycles are closed and the nutrient exchange rate between organisms and environment is low, so nutrient conservation is higher.

- Internal symbiosis is more developed, leading to higher stability. High stability implies resistance of the system to external impacts whether the impacts are from drought or recreation vehicles, the mature ecosystem is likely to be more resistant than the immature. However, caution is necessary in using the dynamics of ecosystems, described in Table , to predict the effects of recreation vehicle impacts. Table deals primarily with relationships between elements that are endemic to the ecosystem.

Management objectives are sometimes contrary to the ecologically deterministic goal of maintaining a climax stage of succession. In forests, for instance, the objective may be to promote the seral stages of succession to secure the greatest annual yield on selected species. These species may be most abundant in the seral stages of succession. In the mature stages, a more complex mixture of species, some of which are economically undesirable, may be present. But these management objectives increase the risk of ecological catostrophe, because stability is low.

Nutrient Cycle

Cycles of nutrient exchange are not well understood in the desert. The components are known, since they are similar to those encountered elsewhere, but it is not presently possible to establish quantitative comparisons of nutrient exchange in various ecological communities.

Plant and animal detritus cannot be used directly by higher plants. Though decomposition by microorganisms, they are made available as sources of food. Ammonification and nitrification are processes, occurring during decomposition, which convert organic nitrogen compounds into forms, that can be utilized by green plants; the primary producers in the community.

Some bacteria can capture free nitrogen from the air and make it available to plants. The two groups of nitrifying bacteria, symbiotic and non-symbiotic, each include several species. Non-symbiotic bacteria include both aerobic and non-aerobic species.

Symbiotic bacteria are organisms, growing in nodules on the roots of legumes (eq. mesquite, etc.). They obtain food, energy and minerals from the legume and in turn supply it with some of its nitrogen requirements. Many legumes are found in the desert, but their quantitative nitrogen contribution is unknown. The nitrogen held in the nodules can be: (1) used by the plant, (2) excreted from the nodule into the soil and used by other plants, or (3) when the plant dies, released to the soil after decomposition.

Nitrogen fixation increases the soil's supply of nitrogen and nitrification changes the compounds in which the nitrogen is held. Any disruption of this cycle would be harmful to the soil's ability to support plant life.

1. Visual Aesthetics. Many recreationists, whether they drive recreation vehicles or not, come to the desert primarily to see, paint, or photograph the unique desert landscapes. Numerous books and magazines express and illustrate the beauty of the desert. Famous photographers, such as Ansel Adams, have published hundreds of pictures of the desert and many different desert scenes and areas are featured monthly in such magazines as Arizona Highways and the Desert Magazine.

We believe the desert is widely accepted as a visually interesting and beautiful place. Some people engaged in vehicle oriented recreational activities, in which visual quality is not one of the most important attraction factors, will abandon an area after some of its visual components (rock formations, shrubs) have been destroyed by excessive vehicle use.

Visual Anticipation

Beauty is in the eye of the beholder. As a recreationist drives toward the desert, the visual experiences are sequentially presented. Where the highway goes determines the variety of scenes many recreationists will see. If a recreationist only travels desert freeways and roads that pass through broad desert valleys, where there is little topographic relief or little vegetation variety, perhaps a rather monotonous stereotype is formed in their minds. Conversely, if a visitor only travels at 65 miles or 75 miles per hour through the desert, he will only see a limited amount of what the desert visually offers. At fast speeds the obvious visual features are primarily large objects, such as mountain ranges, pinnacles, large joshua trees, etc. At progressively slower speeds smaller items take on visual importance. Only standing still, can one examine the intricacies of a desert lilly.

The perception of visual intrusions depends on anticipation, viewing speed, and visual sequences. If the visitor has a preconceived notion or anticipation of desert beauty that excludes recreation vehicles from the scene, the presence of any number of recreation vehicles will intrude on his visual experience. This intrusion may vary with the speed of travel. That is, slower travel speeds will give the observer more time to focus on an intrusion than fast speeds. Thus viewing off-road use of recreation vehicles from a freeway may be less objectionable than viewing them on a slow speed road. Likewise, if many vehicles are seen at points along the freeway, they may become accepted as features of the landscape and, thus be less considered objectionable, when encountered far off the main highways, by those interested in driving for pleasure. Conversely, if one came suddenly upon vehicles or the land scarring effect of vehicles, the greater visual contrast might strongly flag them as intrusions.

The "Natural" Desert

Man-made visual intrusions are more obvious to those with greater awareness of the natural textures, colors and patterns found in the desert. The shapes, colors and textures of RV's, buildings and signs are much more rigidly geometric than those of forms naturally occurring in the

desert. Simonds (1961) has said that individual "growing objects in nature are often symmetrical due to the bilateral formation of their germ cell or seed; the natural landscape, a product of infinitely divergent forces, is rarely symmetrical." The muted desert colors also strongly contrast with the flashy, highly pigmented colors frequently seen on RV's.

An Awesome Scale

The desert, largely because of the lack of visual intrusions and visual barriers, may seem bigger than those things viewed in "normal life." Our perception of size is based on experience. Things whose dimensions are frequently viewed, such as cars, streets, backyards, houses and doors are perceived as normal. A person seldom has a chance to see for many miles without the interruption of buildings, roads, houses, or some other man-made feature. This opportunity is afforded in the extreme on the desert. The desert presents a heroic or awesome scale. It may give a feeling of unlimited space. The viewer may have a feeling of insignificance or awe because of the great perceived size of the desert. If the viewer is a photographer he may switch from a normal to a wide angle lens. The normal lens only gives him a 45 degree view. The wide angle may give him 75 degrees. But even at 75 degrees view he may be missing much of the desert landscape that is unimpaired by man-made intrusions. Such an experience may be rather unique to the desert. Many forests, grasslands and woodlands simply do not afford such a heroic view.

Colors and Textures

The desert offers many colors and textures not common to other ecosystems such as forests and grasslands. Many of the colors and textures are formed by geologic features and soils. Vegetation frequently is sparse and therefore does not mask these colors, as it would in grasslands or forests. A common sight in the desert is large expanses of an even texture or even color. Any interruption of this common visual scene thus can be viewed as a misfit or irregularity. For instance the light colored rock exposed by recreation vehicles running across a dark surfaced desert pavement is an obvious alteration of the natural desert scene. Likewise, removal of vegetation by vehicles from areas that are uniformly vegetated will be an obvious scar.

Air Clarity and Light Quality

Clean air and dark blue skies, especially of the Mojave desert, frequently offer great contrast to the polluted air and brownish skies of the desert recreationist's home in the Los Angeles basin. Many come to the desert simply for this contrast.

The use of recreation vehicles, especially in large numbers on some desert soils, cause the atmosphere to be filled with dust. The dust and other pollutants, of course, refract the short "blue" waves of light and the sky

appears brownish. Perhaps if a critical, but unknown, number of vehicles continually run across the desert soils, the experience of clear air and dark blue skies may become a thing of the past. Already, in the Coachella and Imperial Valleys and also at the base of mountains north of the Cajon Pass, photochemical oxidants dirty the air and mask the view. Ironically this pollution causes beautiful sunsets. The air pollutants help to divert the short wave-length blue light waves and mirror the long wave-length reds and oranges.

Rating Considerations for Potential Value of Visual Aesthetics

The entire study area was rated for their aesthetic values by a 5-man BLM team. From this rating a map showing (a) prime, (b) choice and (c) common visual quality was developed (Figure 17). The criteria used are those set forth in BLM Manual 6111 - "Quality Evaluation of Recreation Use Opportunities, Illustration 9-A." The basic criteria used were land form, color, water, vegetation, uniqueness and intrusions. Then the rating team judged each use area relative to the entire desert. The judgments were made on the existing situation and not on the potential scenic values in the area.

Figure 16:

VISUAL ENVIRONMENTAL QUALITY

THE VISUAL QUALITY RATINGS SHOWN HERE WERE DETERMINED BY A PANEL FOLLOWING THE CRITERIA DESCRIBED ON PAGE ___.

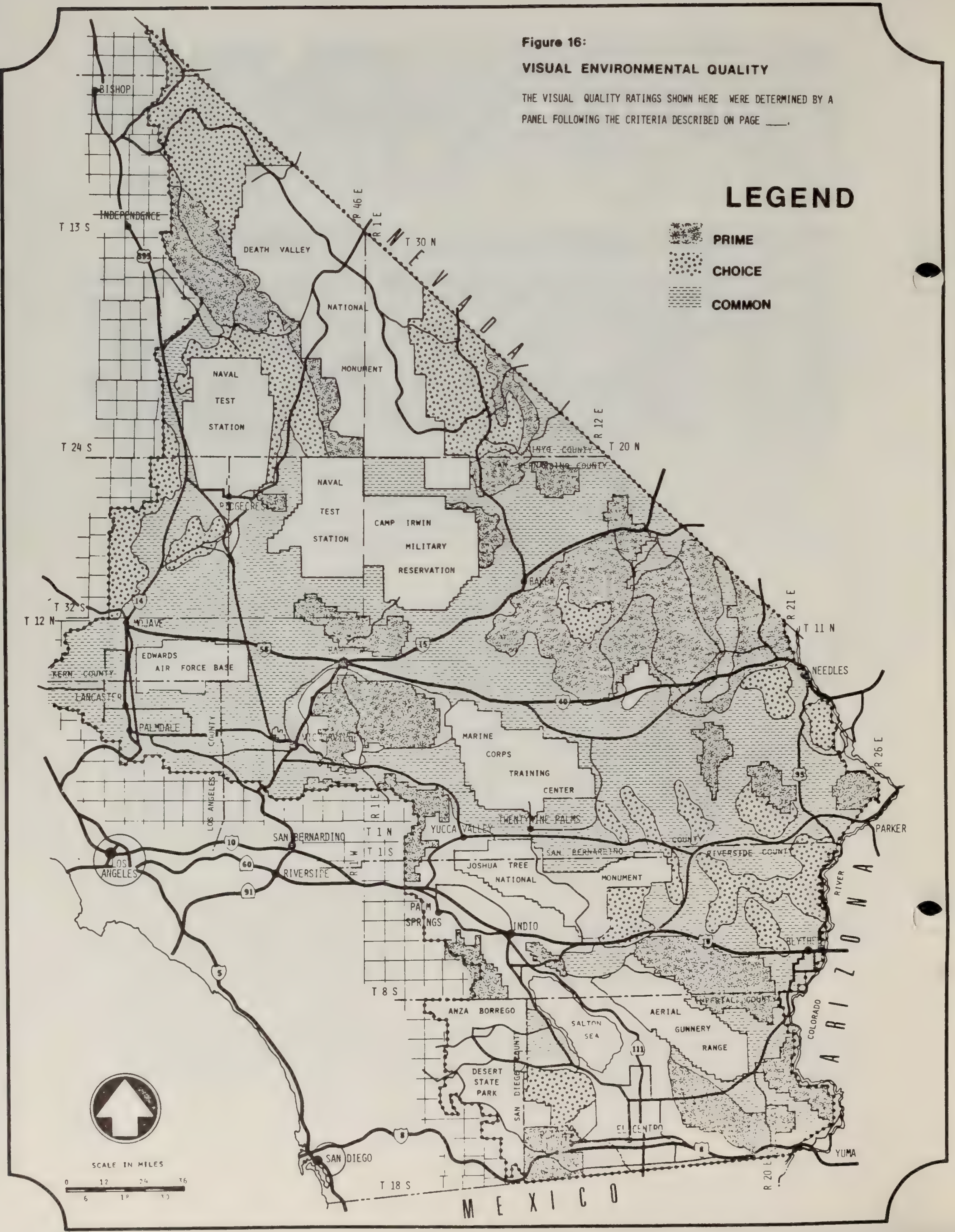


Figure 17. Quality Evaluation Chart for Sightseeing - Scenery (BLM Manual #6111)

Quality Evaluation Chart

SCENERY

KEY FACTORS	RATING CRITERIA AND SCORE		
① LAND FORM	Vertical or near vertical cliffs, spires, highly eroded formations, massive rock outcrops, severe surface variation. 4	Steep canyon walls, mesas, interesting erosional patterns, variety in size & shape of land forms. 2	Rolling hills, foothills, flat valley bottoms. 1
② COLOR	Rich color combinations variety or vivid contrasts in the color of soil, rocks, vegetation or water. 4	Some variety in colors and contrast of the soil, rocks & vegetation, but not dominant. 2	Subtle color variations, little contrast, generally muted tones. Nothing really eye-catching. 1
③ WATER	Still, chance for reflections or cascading white water, a dominant factor in the landscape. 4	Moving and in view or still but not dominant. 2	Absent or present but seldom seen. 1
④ VEGETATION	A harmonious variation in form, texture, pattern, and type. 4	Some variation in pattern and texture, but only one or two major types. 2	Little or no variation, contrast lacking. 1
⑤ UNIQUENESS	One of a kind or very rare within region. 6	Unusual but similar to others within the region. 2	Interesting in its setting, but fairly common within the region. 1
⑥ INTRUSIONS	Free from aesthetically undesirable or discordant sights and influences. 2	Scenic quality is somewhat depreciated by inharmoneous intrusions but not so extensive that the scenic qualities are entirely negated. 1	Intrusions are so extensive that scenic qualities are for the most part nullified. -4

A = 15-24 B = 10-14 C = 1-9

EXPLANATION OF RATING CRITERIA

① Land Form or topography becomes more interesting as it gets steeper and more massive. Examples of outstanding land forms are found in Grand Canyon, the Sawtooth Mountain Range in Idaho, the Wrangle Mountain Range in Alaska, Rocky Mountain National Park, etc.

② Color. Consider the overall color of the basic components of the landscape (i.e., soil, rocks, vegetation, etc.) as they appear during the high use season. Key factors to consider in rating "color" are variety, contrast, and harmony.

③ Water is that ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score.

④ Vegetation. Give primary consideration to the variety of patterns, forms, and texture created by the vegetation.

⑤ Uniqueness. This factor provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique within any one physiographic region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often it is a number of not so spectacular elements in the proper combination that produces the most pleasing scenery -- the uniqueness factor can be used to recognize this type of area and give it the added emphasis it needs.

⑥ Intrusions. Consider the impact of man-made improvements on the aesthetic quality. These intrusions can have a positive or negative aesthetic impact. Rate accordingly.

2. Ambient Desert Noise and Noise Pollution. In a discussion of noise pollution, the resource concerns silence or at least the normal sounds associated with natural conditions. It is not the complete absence of sound that is unnatural. Sounds generally associated with the desert are really very subtle and muted such as light winds through trees and shrubs, few birds and animal sounds, virtually none of the man-made sounds of the city are audible.

As a contrast to the natural condition the 20th century has brought an increasing crescendo of man-made sounds from vehicles of all types, cars, trucks, motorcycles, and airplanes. No region is so remote as to be immune from these sounds. Sonic booms are experienced in areas far from traveled roads and recently four-wheel drive vehicles, tote-goats and the like have made inroads into lands otherwise considered primitive. In winter, areas covered with snow are made accessible by snow mobiles. The next step may be perfection of a family helicopter or air mobile. These intrusions are diminishing one of the desert's prime resources, silence of solitude.

How is "loudness" of noise defined? The scientific approach deals in terms of decibels (db.). Decibels are a measure of the sound pressure level. The response of the human ear ranges from one db., the threshold of hearing, to about 120 db. which is at the threshold of pain. Between these values some typical sound levels are: 30 db., a soft whisper at 15 feet; 55 db., light auto traffic at 50 feet; 85 db., a pneumatic drill at 50 feet and 105 db. an automobile horn at 3 feet.

Extended exposure to levels of sound above 80-85 db. is generally considered to cause permanent hearing loss. The perceived "loudness" of sound approximately doubles with every 10 decibel increase. As can be seen in Figure the actual measurement factor of sound increases tenfold with each increase of 10 decibels. Motorcycle noises have been subject to special ordinances in several cities such as Missoula, Montana, Detroit, Chicago and Minneapolis. Chicago prohibits motorcycle noise in excess of 82 db. at speeds up to 35 mph. and 86 above speeds of 35 mph. (measured at 50 feet from the vehicle) up to January 1, 1978. After January 1, 1978 these limits will drop to 78 db. and 82 db. for speeds below and above 35 mph., respectively. Chicago will also prohibit sales of motorcycles above these noise standards.

These standards are approximately the same as current Chicago standards for automobile noise levels. More and more cities are beginning to set noise limits in residential areas, on electric tools, appliances, lawn mowers, air conditioners, or any other device which annoy or disturb the quiet, comfort or repose of persons in the vicinity. (Taken from city ordinances of several U.S. cities.)

Without question there was a period in time not long ago (less than 100 years) when the desert was a quiet place with few people and fewer machines of any kind. Writers of the Zane Grey breed have used this silence as part of the overall desert picture along with the purple hills and silver sage. The coyote howl or burro bray erupts as a startling sound in the

Figure 19. Increase in Sound Loudness Measured in Decibels

Decibels	Factor of Increase	Example of Sound to Human Ear
1	1	Threshold of Sound
10	10	
20	100	
30	1000	Soft Whisper at 15 feet
40	10,000	
50	100,000	Light Auto Traffic at 50 feet
60	1,000,000	Ordinary Conversation
70	10,000,000	Legislated Level for Snow Mobiles in Massachusetts, 1974
80	100,000,000	Pneumatic drill at 50 feet
90	1,000,000,000	
100	10,000,000,000	

midst of all this solitude. The majority of sounds, even then, came from man, his animals, and his devices - wagons, windmills, ore crushers, and the like. But this was a quiet age by comparison with today.

Silence and Solitude

What is the value of a silent stream or lonely spot in the sand dunes with only the whisper of a gentle breeze? It must have a value if men remember and write about it many years after the experience. Since men began writing about deserts around the globe, one aspect stands out - solitude. Not everyone loves the desert because of this feeling but those who do, list quiet solitude as a major asset. In contrast to quiet, noise is tolerated by many but loved by few. At a low level it is often ignored as background sounds. With increases in intensity discomfort, severe pain or permanent physical damage, may occur.

The sounds generated by a recreation vehicle such as a motorcycle, may range from the purr of a finely tuned engine to the squeal of tires, clash of gears, and backfire of the exhaust. Multiplied by a hundred or a thousand vehicles the sounds can be horrendous.

The sensitive areas in regard to noise pollution must be discussed from several views. The first category is an area which has been identified as having primitive, wilderness or great natural resource values, such as wildlife habitat. Such an area should not be subject to extreme concentration of noise. Some typical areas of this type are the 19 areas identified by Secretary of Interior Morton during the 1971 Dedication at the Imperial Sand Dunes. If some areas are to be heavily used by noisy machines, then other similar areas should be set aside for solitude to at least preserve examples of what the desert was in the past.

With few exceptions most noise pollution in the desert is caused by airplanes, cars, trucks, and motorcycles. Near the fringe of some of the desert cities there are various small industrial plants which add to the noise but these are a small percent of the total. (Figure 18.)

Another source of noise on the desert are sounds emanating from major freeways such as Interstates 15, 40, 10 and 8. The heavy traffic flows of trucks, cars, and motorcycles often creates a fairly high noise level for long periods of time especially in the vicinity of desert cities. Smaller desert roads on the desert exhibit the same noise pollution to a lesser degree for shorter periods of time. Various planes and helicopters add an occassional sound but this too has a small total impact. The one major exception could be the noise from sonic booms arising from aircraft testing in and around Edwards Air Force Base. Those general areas have been broadly identified on Map .

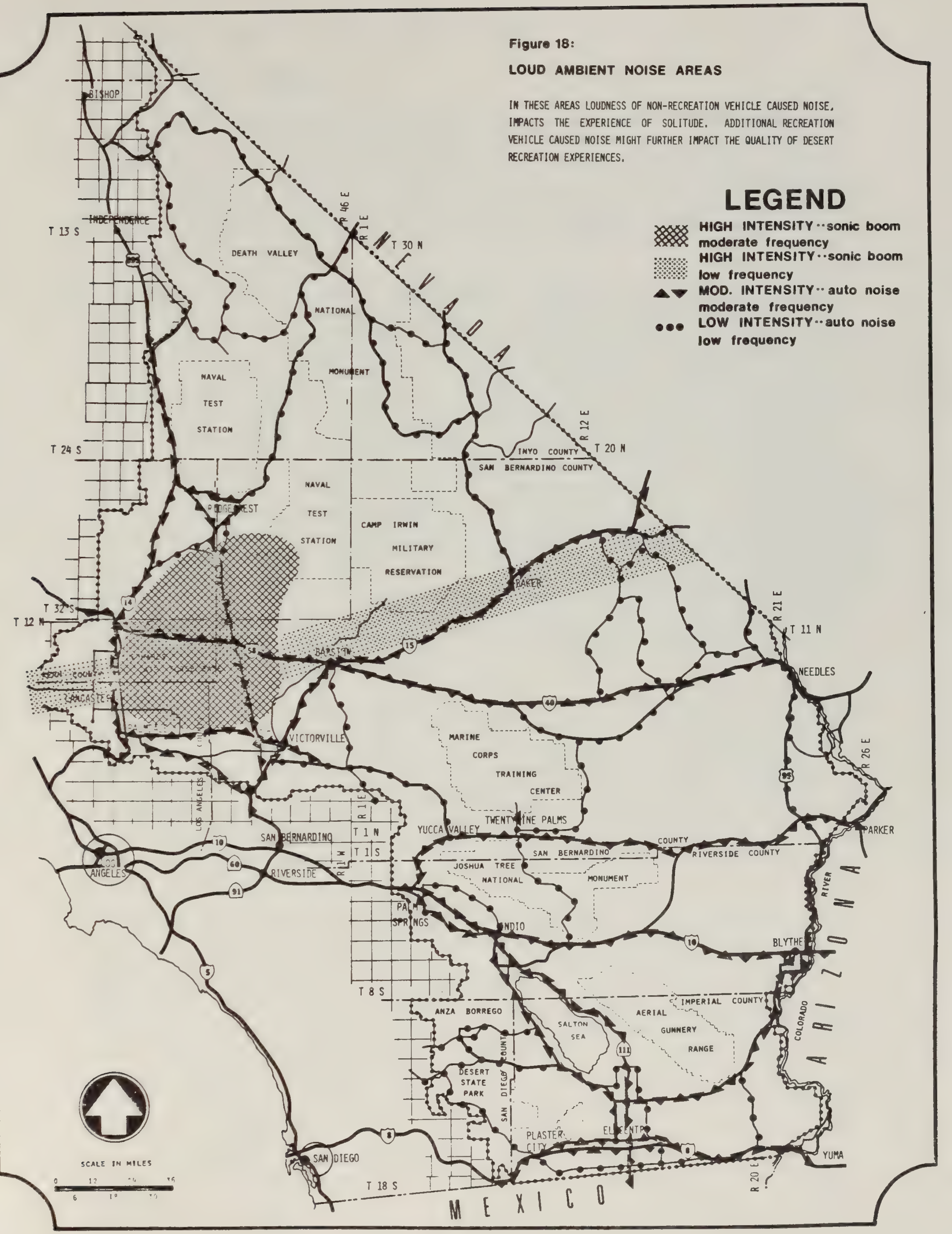


Figure 18:

LOUD AMBIENT NOISE AREAS

IN THESE AREAS LOUDNESS OF NON-RECREATION VEHICLE CAUSED NOISE, IMPACTS THE EXPERIENCE OF SOLITUDE. ADDITIONAL RECREATION VEHICLE CAUSED NOISE MIGHT FURTHER IMPACT THE QUALITY OF DESERT RECREATION EXPERIENCES.

E. RESOURCE USES AND HUMAN INTEREST VALUES

1. Unique Features

a. Archaeological Resources. The archaeological resources of the California Desert include all evidence of past human activity, other than historical documents, which can be used to reconstruct the lifeways and cultural history of past peoples and for the study of past cultural systems. These include sites, artifacts, environmental data and other relevant information.

Information on this non-renewable resource is very unevenly known, with only the most meager information available for many areas. It is usually assumed by professional archaeologists that less than 10% of the total archaeological site potential for the California Desert has been inventoried. This means that approximately 90% of the desert's archaeological sites have, as yet, gone unrecorded. Archaeologists working in the California Desert have estimated an overall archaeological site density from 0.25 sites per square mile to 10 sites per square mile (cf. Weide 1973). If one assumes a conservative estimate of 1 site per square mile, then it can be calculated that there should be more than 40,000 archaeological sites in the California Desert. Since it is roughly estimated that about 3,000 desert sites have been officially recorded in the seven counties in which the California Desert is contained, then even an estimate on 1 site per square mile would mean that only 7.5% of the total archaeological potential has been recorded.

This paucity in the archaeological record is due to the fact that only a small portion of the desert has been subject to any form of archaeological reconnaissance, and even a smaller portion has been intensively surveyed for archaeological resources. Until more systematic archaeological field work is conducted, this lack of specific information for a large portion of the desert will allow for only an intuitive assessment, at best, for predicting and evaluating archaeological resources.

Information that is available has pointed out that the area is one of substantial past and present environmental and cultural diversity. Few arid areas in the world demonstrate such a diversity over such a long period of time as the California Desert. As such, the area constitutes an excellent laboratory for the study of man-environment interaction among what were basically hunters and gatherers. Many desert archaeological sites exist only on the surface. If artifacts are picked up off these sites or if vehicles are driven over them, they may be destroyed forever. Even sites with buried material can not withstand too much disturbance; any disturbance destroys archaeological context -- the basis for scientific archaeological study. Once archaeological data is destroyed, whether it is a whole site or a fraction of the site, it can not be replaced, regrown or replenished.

Early man - As previously mentioned, the California Desert has been occupied by Man for the past 10,000 or more years. Any archaeological site that falls in this earlier period, roughly 6,000 years or older, can be considered an "Early Man" site. These may range from surface scatter with ancient tools to deep alluvial fan sites such as the Calico Site near Yermo where attempts are being made to push back man's antiquity in the New World to at least 50,000 years ago.

Effects of recreation vehicular use on this resource is both direct and indirect (Figure 20). Direct impact comes in the form of the physical destruction caused when wheels come in contact with archaeological sites. Fragile and friable sites (e.g., intaglios, trails, flake and ceramic scatters) are extremely vulnerable and can not take much impact before the information that they could yield is lost forever. Larger sites (e.g., occupation sites) that may be more "resistant" can not withstand continued and increased impact.

Indirect impact comes in the form of providing access to areas previously untouched and by increasing impact in areas where impact was previously minimal. Sites (e.g., petroglyphs, pictographs, and special use sites) previously unknown are becoming accessible to relic collectors, curio seekers, pot hunters and vandals. This increased impact can be visually demonstrated by the diminishing number of desert rockshelters, caves, and by the increasing number of petroglyph and pictograph sites that have been dynamited, spray-painted, or removed by vandals.

Figure 20. IMPACT ON ARCHAEOLOGICAL SITES FROM RECREATION VEHICLE ACTIVITY

ARCHAEOLOGICAL SITE TYPES	IMPACT FROM RECREATION VEHICLE ACTIVITY Direct	Indirect
Occupation Sites	High	High
Processing or Special Use Sites	Medium	High
Rock Art Sites	Low	High
Intaglios	High	Medium
Trails	High	Medium
Cemetery or Burial Sites	Medium	High
Ceramic Sherd Scatters	High	High
Flake Scatters	High	High
Early Man	High	High

Desert Archaeological Sites

Archaeological sites vary from the faint traces of early hunters and gatherers who lived in the California Desert 10,000 or more years ago, leaving their artifacts and other tangible remains in fragile scatters in the desert pavement, to the extensive complexes of villages, camp sites, gathering and processing stations, and ceremonial sites linked by elaborate trail systems of the desert's late prehistoric inhabitants.

The cultural chronology that these sites represent has been discussed by Rogers (1939), Wallace (1962), Hunt (1960), Lanning (1963), Warren and True (1961), Kowta (1969), Donnan (1968), and Pourade (1966). The most recent refinement in the chronological sequence of the archaeology of the California Desert has been outlined by Bettinger and Taylor (1972) and is summarized in Figure 21. The temporal-periods outlined in this chart are, as pointed out by Bettinger and Taylor, readily identifiable in archaeological contexts and will assist the future undertaking of more complex conceptual problems in prehistoric studies.

To facilitate discussion, the archaeological sites of the California Desert can be separated into the following types:

Occupation Sites - This site type represents long-term or seasonal villages or base camps. Base camps were the center of nearly every economic or social activity. Archaeological material expected at these sites are house rings, storage pits, cooking hearths, a wide range of tools, scattered potsherds, and a moderate to heavy amount of chippage waste. In short, they contain practically the full range of aboriginal products. Most of these sites contain midden deposits, culturally altered soil, which is the result of extensive human occupation. Since sites of this type are usually large and contain a wide variety of cultural items and cultural features, they are easily recognized by relic collectors and pot hunters. This has made them open targets for vandalism and destruction. These sites are also limited in number and represent the focal point around which the major cultural activities centered.

Processing or special use sites - These sites represent loci of specific activities that were carried out by the desert's aboriginal populations. These sites include seed-grinding stations, bedrock mortar complexes, roasting pits, cache sites, temporary campsites, fish traps, hunting blinds, quarries, rock shelters, etc. Individually they may be interesting only as cultural items and/or for cultural features which they contain. However, collectively they are very significant, especially if they can be linked with a particular base camp from which these specific activities were generated. They then become very important in the

Figure 21. Chronological Sequence of the Archaeology of the California Desert (From Bettinger and Taylor 1972).

DATES	POINT TYPES	INTERIOR SOUTHERN CALIFORNIA SERIES	OWENS LAKE	DEATH VALLEY	MOHAVE DESERT	COLORADO
Historic	COTTONWOOD SERIES and DESERT SIDE-NOTCHED	MARANA	COTTONWOOD	DEATH VALLEY IV	DESERT MOHAVE	YURAN-SHOSHONEAN
A.D. 1300						
	ROSE SPRING SERIES and EASTICATE-EXPANDING STEM	HAIWEE	LATE ROSE SPRING	DEATH VALLEY III	AMARGOSA II	III
A.D. 600			MIDDLE ROSE SPRING			
	ELKO SERIES and GYPSUM CAVE	NEWBERRY		LATE DEATH VALLEY II	AMARGOSA I	III
1200 B.C.			EARLY ROSE SPRING			
	LITTLE LAKE SERIES and/or PINTO BASIN SERIES	LITTLE LAKE	LITTLE LAKE	EARLY DEATH VALLEY II	PINTO	PINTO BASIN
4000 B.C.						
	SILVER LAKE and LAKE MOHAVE	MOHAVE	(OWENS LAKE II)	DEATH VALLEY I	LAKE MOHAVE	

study of settlement/subsistence patterns of the past cultures. Also, since these sites are normally relatively small, they are extremely vulnerable, both directly and indirectly, to any vehicular activity.

Rock art sites - Petroglyphs and pictographs make up this site type. Petroglyphs and pictographs are pecked and painted pictures of animals, men, mythical beings, or geometric and abstract designs usually found on exposed, flat rock surfaces in the open air or on the walls of rock shelters or occasionally on caves throughout the desert. The California Desert contains some of the world's best examples of this art form and probably the world's greatest density. Unfortunately, these have become the objects of vandalism and destructive acts that are the apparent result of increased public use and abuse.

Intaglios - These are large figures of animals, humans, and geometric forms made in the desert pavements. These cultural features have been reported along the lower Colorado River and in the Yuha Desert. These features are extremely fragile and the disturbance of their desert pavement environment could result in the complete loss of these unique figures. Rock alignments and other unusual surface features can also be included under this site type.

Trails - Portions of ancient aboriginal trails are still present throughout the desert. These remnants may include poorly defined portions that are marked only by a few broken pottery sherds or well preserved portions more than two miles long, clearly visible in the desert pavement with trail markers, petroglyphs and sleeping circles along the way. Trails are extremely vulnerable to direct vehicular use.

Cemeteries or burials - Prehistoric Indian cemeteries, burials, cremations, and mourning ceremony sites make up this type. Burial sites range from isolated burials in shallow holes to extensive cemeteries.

Ceramic sherd scatters - This site type can range from the remains of a broken olla or pottery vessel to an extensive surface scatter of pottery or ceramic ware. These sites are fairly common throughout the desert. They may contain a few other cultural items but the predominant ones are pottery sherds. These sites are represented almost totally by surface material. Driving vehicles across them can result in their complete destruction.

Flake scatters - This site type is also fairly common in the desert. Sites of this type consist of scattered chippage waste of flaking material such as chalcedony, chert, jasper, rhyolite, or obsidian. Like the ceramic sherd scatters, these sites consist almost exclusively of surface material and therefore are extremely fragile. Also like the special use sites, when they can be tied in with the settlement/subsistence pattern of a particular area their significance becomes even greater.

b. Paleontological Resources. The paleontology of the Desert Area is commensurate in importance with the archaeological remains. Some of the most important deposits in America exist in the California Desert. During the past 60 years, it has already produced invaluable fossil remains. These remains have allowed scientists and the general public alike to appreciate and develop an understanding of the historical, geological and biological evolution of the region. It is becoming increasingly possible to not only portray this evolution in a more sophisticated way as information increases, but to make meaningful comparisons between these aspects of the local desert and those of other parts of North America, and other parts of the world.

Because of its general accessibility and sparse vegetation, the desert is admirably suited to a study of this sort. From the professional standpoint, it provides a unique opportunity for meaningful research and study, as well as being an excellent cultural teaching facility, an aspect of the desert which is not stressed enough. Results of scientific investigations are available to the public through displays at various University of California campuses (Berkeley, Riverside, San Diego, etc.) and through museums such as San Bernardino County Museum and Los Angeles County Museum of Natural History as well as by scientific and popular articles from these and other institutions.

The deposits near Barstow (Barstow Formation) are probably some of the most important in North America. The fossil vertebrates they contain provide the basis for the Barstovian North American Land Mammal Age. This was the fundamental late Miocene unit of non-marine faunal correlation in this continent. Other areas in the Desert demonstrate that localities of paleontological interest are widespread in this region. These range in time from early Miocene to Pleistocene and provide crucial evidence as to the historical mammalian evolution, paleoecology, and paleoclimatology of the region. Two of these localities, Dagget and South Cady Mountains, suggest that the Mojave is still in a pioneering stage of development relative to fossil mammals. These sites are of middle and early Miocene age, respectively, and were discovered in the mid-1960's. Before their discovery, faunas older than late Miocene (Barstow equivalent) were almost unknown in the Mojave. Recently, fossil discoveries indicate that the California Desert contains Tertiary vertebrate remains representative of almost every epoch back through the Paleocene.

Vertebrates are not the only important paleontological resources found here. Extensive invertebrate and flora fossil deposits are found in association with many of the vertebrate localities and in various separate localities throughout the California Desert. For example, extensive

invertebrate deposits of marine fossils are located within the Yuha Desert Area. The desert also contains fossil bearing formations of the Paleozoio Era, such as the trilobite localities in the Marble Mountains in eastern Mojave Desert and in the Inyo Mountains in the Saline Valley area. As well, the oldest representative of the phylum Echinodermata, the Helicoplacus (an early ancestor to the starfish), which may date into the Pre-Cambrian Era, has been found in the area around the North Saline Valley.

As an example of the variety of the California Desert's paleontological resources the following is given:

Barstow Fossil Area - This area contains the classic locality for the Barstovian Land Mammal Age. This locality contains the type section for Upper Miocene vertebrates, containing a wide variety of large and small mammals, birds, reptiles and, even, plant remains. Especially noteworthy are trackways, molds of animal tracks (e.g., camel) and an extensive mud deposit containing animal teeth.

El Paso Mountains Fossil Area - Three important vertebrate fossil formations outcrop throughout this area. The best known is the Richardo Formation. This formation represents the best Lower Pliocene fossil beds in Southern California and they contain a variety of indigonous mammal uncommon to this epoch. A second significant fossil formation of this area is the Golar. It contains the only major Paleocene vertebrate locality on the west coast. The Bopesta Formation represents the third vertebrate fossil formation within this area. This late Miocene formation contains localities of Barstovian mammals.

Coso Mountain Fossil Area - The most significant fossils in this area are represented in the Coso formation. This formation contains some of the best Blancan mammal fossils found in the entire desert area. Included are Borophagus, the largest and last of the hyaenoid dogs, Equres, the shortjawed mastodons, and Platygonus, a large peccary. At the time these animals lived the area must have been of an abundant grassland type, for the animals with high-crowned, grazing teeth were numerous. The formation also contains the type localities for a species of Early Pleistocene horse and a genus of rodent.

Amargosa Canyon Fossil Area - Associated with the Tecopa Formation, this is a unique locality containing an excellent site of fossils representing the variety of Middle Pleistocene terrestrial life. A unique species of horse and the remains of both large and small camel have been recorded, as have some unique species of mammal that have as yet gone un-named. Also unique is the fact that mammal bone can be found in the upright position indicating apparent victims of having been trapped in the mud.

Eastern Mojave Fossil Areas - Some of the Miocene fossil deposits within these areas seem to be similar in age to the Barstovian Land Mammal Age but represent different environmental deposition and regional paleo-ecosystems. Based on the little work that has been carried out in the area, there is an excellent potential for the correlation of paleo-flora material with the paleo-fauna remains. The extensive Tertiary sediments throughout the area would support this possibility. Blancan Spring Mounds also appear in the area. This locality has yielded remains of unique large and small horse, mammoth, camel, small rodent, and, occasionally birds.

The limestone fissure fills and caves within the areas also yield a vast quality of vertebrate fossils. The unique aspect of these fossils is that they demonstrate that an alpine environment once encompassed the area. Marmot and pika fossils have been recorded, as have voles, pigmy cottontail, camel and horses.

The Valley Wells locality is represented by Rancholabrean and Irvingtonian Fossils. This is the only recorded Irvingtonian Land Mammal Age locality in the Eastern Mojave Desert. It contains two rare species of horse (i.e., *Equis conversidens* and *Equis simplicidens*). Mammoth remains have been recently recorded here. There is some indications that the fossil assemblage from Valley Wells is transitional between the Rancholabrean to the Irvingtonian Land Mammal Age, which would place the age of the mammoth at about 100,000 years.

Yuha Desert - Coyote Mountain Fossil Areas - Within these areas are found the most extensive fossil bearing marine deposits in the California Desert. Fine deposits of fossilized sand dollars and numerous other marine shells are located in the localities around Fossil Canyon. In the Yuha Buttes is located an outstanding deposit of marine life, with oyster shells and gastropods of primary importance.

Trona Pinnacles - These pleistocene algae pinnacles contain sediments that are well known type sections for paleo-climatic studies. Various works have been done with these sediments on fossil pollen.

Vehicular Impact on Paleontological Resources - Impact on paleontological resources is both direct and indirect. Direct impact simply comes from vehicles driving over fossil outcropping. The fossil remains of extinct animals, especially vertebrates, are the most susceptible to this type of impact. Unique and rare finds can be extremely impacted or surface material that could lead scientists to significant discoveries may be obliterated before proper scientific study could be carried out within an area.

Due to fact that many exposed fossil formations are likely to occur in situations that would make direct impact difficult (e.g., on vertical outcroppings), indirect impact has the greatest destructive potential. Opening access to areas previously undisturbed or unstudied, increases impact in areas where impact was previously minimal by expanding accessibility to novice fossil collectors, rockhounds, and "amateur geologists". This can result in the complete loss of the scientific value of an area's paleontological resources.

In addition, indirect impact can result from the destruction of the natural weathered surface of badland areas, thus masking the presence of surface bone and/or shell and of "bone-trails" of float leading to articulated specimens still in place in the earth. Continuous vehicular use in an area can accelerate deep weathering and gully formation which in turn rapidly destroy fossil material.

Like the archaeological resources, paleontological resources are a limited, fragile, non-renewable part of the environment, and disturbance of them results in irreversible and cumulative impacts.

c. Historical Resources. The Mojave and Colorado Deserts are the back doors to Southern California and have reserved a prominent place in the history of the westward movement. These deserts presented to the traveler a barren waste land with precious little water, extreme climate and a hostile native inhabitance. They could avoid these hazards only by taking an equally hazardous voyage around the "Horn" or by crossing fever infested Panama. The following trails provided the major avenues for travel across the deserts:

Spanish Trail - Connected Los Angeles with Santa Fe and New Mexico. It later became the Salt Lake Road connecting the southland with the popular California/Oregon Trail.

Emigrant Trail - This route also connected Los Angeles with Santa Fe following the most southerly course. The Butterfield Stage later used the road in its famous run between St. Louis, Missouri and San Francisco.

Government Road - Provided the major route of travel connecting Los Angeles with the east. It crossed the Mojave Desert from the Colorado River and Fort Mojave to its intersection with the Spanish trail some distance east of Barstow. A number of small forts or "redoubts" were established about one day journey apart. The army patrolled the road and escorted the U. S. Mail.

Prospecting and mining activity migrated down the Owens Valley into the Mojave Desert, and it was not long before the desert was dotted with mining camps, "digging" mill sites and criss-crossed with roads, rails and tram-ways. Later a few camps became towns and survived to the present - Darwin and Calico are out best examples of survival in the region.

The mining era was followed by attempts to change the Desert into a garden. Agricultural communities developed a few places. The Imperial Valley proved that importing water from the Colorado River could change a barren ancient ocean bottom to one of the most productive agricultural areas in the world.

During World War II huge tracts of land became the scene of military maneuvers - George Patton trained and conditioned his troops for the North African Campaign.

Figure 22 lists the major historic sites by county. Most of the information about these sites was obtained from the states inventory of historic places prepared by the Department of Parks and Recreation, State of California.

Three historic periods have been identified and given arbitrary time frames. The earliest period "Explored/Settlement" goes back to the Spanish penetration through the region starting about 1775 and extending to the end of the Civil War 1865. The second period "Mining" extends from 1865 to 1900 and the period "Recent" brings us from 1900 up to the end of World War II 1945.

Figure 22 -HISTORIC SITES ON THE CALIFORNIA DESERT

SITE	PERIOD	COUNTY	RECREATION VEHICLE DESIGNATION
Saline Valley Saltworks & Tram	Mining	Inyo	ER & T
Beverage Mining Camp	Mining	Inyo	ER & T
Cerro Gordo Mines	Mining	Inyo	ER & T
Olancha Mill Site	Mining	Inyo	Private
Darwin Mining Area	Mining	Inyo	ER & T
Ballarat Mining Camp	Mining	Inyo	ER & T
Panamint City	Mining	Inyo	ER & T
Ryan Mining Camp	Mining	Inyo	ER & T
Greenwater Mining Camp	Mining	Inyo	ER & T
Galer (site)	Mining	Kern	DR & T
Last Chance Canyon	Mining	Kern	DR & T
Garlock (Townsite)	Mining	Kern	DR & T
20 Mule Team Rd. from Death Valley	Mining	Kern	ER & T
Goldstone Mines	Mining	San Bernardino	DR & T
Cool Gardie Places Camp	Mining	San Bernardino	DR & T
Calico Area	Mining	San Bernardino	DR & T
Spanish Trail	Expl. & Settlement	San Bernardino & Inyo	ER & T, DR & T, Closed Special Design
Salt Sp	Exp. & Set.	Inyo	Special Design
"Old Govt. Rd."	Exp. & Set.	San Bernardino	DR & T
Camp Cady	Exp. & Set.	San Bernardino	Private
Ft. Soda	Exp. & Set.	San Bernardino	Special Design
Morl Sp	Exp. & Set.	San Bernardino	DR & T
Ft Rock Sp	Exp. & Set.	San Bernardino	DR & T

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Gov't Hole	Exp. & Set.	San Bernardino	DR & T
Ft. Piute	Exp. & Set.	San Bernardino	ER & T
Tonapah & Tidewater	Recent	San Bernardino & Inyo	Sp. Design/ER & T Closed
Providence Mining Camp	Mining	San Bernardino	DR & T
Dale Mining District	Mining	San Bernardino	Special Design
Bornwell & Searchlight RR	Mining	San Bernardino	DR & T
WWII Army Training (Pattons Camp)	Recent	Riverside	ER &T
Travertine Point	Exploration	Riverside	DR & T
Bradshaw Trail	Mining	Riverside	DR & T/Open
Tumco Mining Camp	Mining	Imperial	ER & T
Plank Road	Recent	Imperial	Special Design
Emigrant/Butterfield Mormon/Trail	Explor. & Set.	Imperial	Special Design

RECREATION VEHICLE USE

Recreational vehicle (RV) recreationists are as diverse in their preference for use areas and the activities they participate in as are the variety of vehicle they use. This is important because personal interests, types of vehicles, and uses of the RV may influence land travel patterns and attitudes toward the landscape traveled.

Three "orientation types" of RV recreationists can be identified--activity, vehicle and land oriented. (Peine, 1972). For the vehicle oriented recreationist, the vehicle is an end in itself. His interests lie with the competitive or mechanical aspects of the machine. The activity oriented recreationist uses his vehicle as a means to an end. His vehicle is used as a means of transportation to an area where he can participate in his singular activity. The land oriented category represents by far the majority of RV recreationists on the national resource lands of California. For this orientation type, the vehicle probably draws some interest but the recreational attraction is in some elements of the landscape, such as scenery or remoteness. In general, the land oriented RV recreationist will pursue a larger variety of recreational activities than the activity oriented recreationist.

In order to evaluate recreation vehicle opportunities in the desert and determine the relative value of recreation vehicle experience for each type of RV recreationist, a rating system was developed. The system was then utilized by experienced recreative specialists in evaluating each potential Vehicle Use Area.

DEMAND FOR R.V. RECREATION IN CALIFORNIA

In California, the increase in recreational activities has been channeled, at a generally increasing rate, into the recreation vehicle. A significant portion of the residents of California, in an effort to occupy leisure time with fulfilling activities, have rediscovered the attractions of areas away from permanent human habitation. They are using the products of modern technology to reach into the landscape for a more remote recreational experience with a greater degree of comfort and convenience. To these people, the internal combustion engine provides a power source for adventure.

The sale of recreation vehicles has increased an overall of from 7% to 9% per year since 1969. (Honda et al 1973). There are an estimated 1.8 million motorcycles, (M.O.R.E. 1973) 650-750 (Edwards 1973) thousand four wheel drive vehicles and an undeterminable number of re-constructed vehicles (dune buggies) in the state of California. Nearly 15% of California's population own or have access to an off-road vehicle.

The motorcycle represents an estimated 73% of all recreation vehicles. California contains 17% of the nation's registered motorcycles and only 9% (U.S. Census 1970) of the nation's population. Of the estimated 1.8 million motorcycles in California approximately 67% (Honda et al 1973) are in Southern California.

A 1970 Gallup Poll (Woolsey 1970) estimated one motorcycle for every 10 households in the U.S. In California there was a motorcycle for every 3.5 (U.S. Census 1970) households. The actual number of cycles only partially represents the total number of cycle riders or enthusiasts. There are an estimated 1.2 (Sanford 1973) riders for each motorcycle or 2.1 million enthusiasts. Approximately 1.5 million of these are in Southern California, and over 60% (Honda et al 1973) of these are "off-road" vehicles (not legal on the highways).

RECREATIONAL VEHICLE ORGANIZATIONS

The popularity of recreational vehicle clubs and associations has increased from 15 to 20% (Edwards 1973) per year, or roughly at double the rate of the RV activity. Their rapid growth is a result of the increased need to make RV recreationists desires known to legislative and land use agencies and the obvious social benefits to the participants.

Four large associations represent several hundred clubs with membership totaling near the 50 thousand mark. These associations represent every conceivable vehicle type and nearly all interest groups, the majority of which use an RV to participate in their recreational activities.

These associations are tenacious in their defense of their interests and equally as worthy when a conservation project or other work for the public good is needed.

A nationwide survey indicates that 17.4% (Powers & Asso. 1971) of 4WD owners belong to a recreation club. In California, an estimated 5% to 10% (Edwards 1973) of all RV owners belong to recreation vehicle clubs or associations.

SOCIAL BENEFITS OF RV RECREATION

Conflicting opinions exist on the extent and type of benefits obtainable from participation in RV activities.

Sociologists generally agree that our society lives under the constant pressure of emotional stresses and strains, unknown at any previous time in history. (Clawsin 1966). The American citizen is able to consume more and to live better, but his life is a far more ordered one. In this generally ordered life, recreation in general and outdoor recreation in particular stand as opportunities for free choice.

Many sociologists, and psychologists stress the psychological and emotional need for outdoor recreation. Some stress that, in outdoor recreation, the individual can test his physical fitness and his ability to cope with nature. Recreation is also considered to have significant value in combatting or preventing juvenile delinquency.

Some sociologists disagree. Few argue with the proposition that serious emotional and nervous tensions exist today, but they say that a substantial proportion of the population apparently rarely engages in outdoor recreation. They also agrue that it is the well adjusted, not the ill-adjusted, who both experience outdoor recreation and gain most from so doing.

The only quantifiable "social" benefits identified are related to demand. When people are free to choose how they will spend their time and money, many will choose outdoor recreation. By their actions, they make it clear that they value recreation highly. If the demand and need approaches are not in conflict - some correlations might be drawn.

IMPACTS ON THE RV RECREATIONIST

Efforts to quantify the social impacts resulting from restricting RV activities are inconclusive. The complexity of psychological impacts or RV recreation become obvious when efforts were made to identify specific values. Dr. Robert M. Schneider, (1973) Professor of Behavioral Sciences at California State Pomona, indicated that one of the major attractions, common to all forms of outdoor recreation, is the reduction of role expectation pressures. Dr. Schneider indicated that the most common reason given for outdoor recreational activities is "getting away from it all." He feels that the real reason is not getting away from people but, rather escaping the daily routine and familiar people. In an outdoor situation we can have interactions with people, and not be as conscious of the role expectation of our day to day lives. That is, in an outdoor situation the recreationist can interact with other people without getting overly involved with them.

Dr. Schneider feels that the recreational emphasis on vehicles, particularly Recreational Vehicles among males, is related to the lessened ability of males in today's society to prove or demonstrate masculinity. Related to this is the need for excitement and adventure. Dr. Schneider points out that these factors are quite important to mental health.

Professor Duane R. Johnson, (1973) sociologist from Northern Illinois University feels that the challenge offered from off road recreation in interactions between mind, body, machine and the environment, is an effective means of relaxation. He feels that many social tensions are relaxed.

The Los Angeles YMCA in cooperation with Honda motorcycles is developing a program, in which teenage problem children are taught to ride motorcycles. The program has met with great success. Juveniles with records, and who have broken probation, now stay on probation and stay out of trouble.

(2) Expressed Social Values of M. C. Competition. An independent study, conducted for the Bureau by Mrs. Cherry Stockton, an ergonomist and motorcycle enthusiast and Mr. Albert Buck, a motorcycle cinematography consultant, produced interesting insights into social values attained from competitive events. Mr. Buck and Mrs. Stockton interviewed 100 desert motorcycle competition riders and 50 motorcross riders to quantify social values obtained from competitive motorcycle racing. Mrs. Stockton holds an M.A. in Ergonomics while Mr. Buck is president of all Buck Films, producers of motorcycle racing films. The work was conducted on a voluntary basis. The entire report is presented in Appendix I.

The sample of desert racers cannot be statistically validated, but there is no specific reason to believe that this sample does not represent competitive riders in general. The data was not collected by professional sociologists, but rather by individuals, directly involved in competitive racing at either the participant or commercial level.

(3) Summary of Expressed Social Benefits. The average desert motorcyclist is nearly 32 years of age and has ridden for approximately nine years. Nearly 70% of his riding activities are competitively oriented. Over 93% of his riding is done with club members, friends or family. He indicates that over 93% of his riding is done on public lands.

The sampling of Desert Motorcyclists identified the following relationships or social benefits obtained from the interaction of competitive riders with their families and peers.

(a) Ability for all age groups to adjust, living closely together while camping.

(b) Increases ability and willingness to relate different experiences, and understand other people's life experiences.

(c) Bringing people together from highly divergent backgrounds and allowing interactions, which develop tolerances and understanding for other viewpoints and philosophies of life.

(d) The interaction and participation in an activity where similar interests exist has a tendency to bring out the "best" instincts within an individual. This is expressed in a willingness to offer assistance to individuals one may not be acquainted with.

When asked if motorcycle recreational activities had discontinued or lessened involvement with drugs, alcohol, or other illegal activities, thirty four percent indicated that it had. Desert riders indicated certain emotional benefits derived from their activities, and as feelings of freedom, release of aggressions, and feeling of physical accomplishment, among others. They felt that these factors had helped reduce their dependence on alcohol or drugs.

When asked what things and/or feelings kept him involved with his sport, the motorcyclist indicated feelings of group-family togetherness as being the prime motivation.

When comparing the desert competitive rides with the motorcross riders, who only does 19% of his riding on the public lands, some interesting differences are found.

The motorcross rider does most of his riding in commercial RV parks (68%). They are also younger (average 18.6 years of age) and have ridden for only five years. When the reasons for participating and the emotional stimulation received were analyzed, the responses were much the same for both groups.

It is not possible to adequately analyze the social impacts of off road recreation. There has not been sufficient research to allow identification of either positive or negative social benefits of the activity. It is generally felt that recreation is needed for both mental and physical health. Based on the limited "opinion sample" conducted for the purpose of this report and the numerous adament proponents of RV recreation, together with the increasing popularity of the activity in California, RV recreation must satisfy certain social needs. Social impacts and the question of externalities should be a subject of further research.

Recreational Vehicle Users Experience Preference by Vehicle and Orientation

Type

Figures 25 and 26 represent activity preference by vehicle type and order of preference by orientation type respectively. As indicated by comparing these tables, the motorcyclist seems to be the more vehicle oriented while the four wheel drive vehicle owners are more likely to be land and activity oriented. The dune buggy owner is more likely to be vehicle oriented than is the 4 WD owner. Also, sightseeing and camping, etc. are far more attractive to the 4 WD and dune buggy owners.

RV Recreational Participation Characteristics by Vehicle Type

Motorcycle -

From 30 to 40 percent of all motorcycle owners recreational activities include other family members. Only 6 percent of the time does he ride alone. For those motorcyclists who ride with their family, 58 percent include the entire family. If the entire family is not included, the son or wife is most likely to be riding with the family head. (Honda *et al* 1973). A recent study conducted by the California Department of Parks and Recreation (1972) indicated that the average motorcycle owning family owns 2.1 vehicles.

The average motorcyclist seldom uses the desert for less than two consecutive days. Figure 27 indicates that as available time increases so does the RV recreationists willingness to travel. If less than one day is available, the average recreationist sampled in the State Park Study will travel little more than one hour to reach a use area. The study also showed that popular use areas are seldom close to population centers and, only 12 percent of motorcycle owners ride their vehicle to the use area.

The average motorcycle operating time is about five hours per day (Figure 28). Interestingly, 45 percent of the sample did not operate their motorcycles on weekdays. Those who do operate on weekdays spend an average of 1.8 weekdays per month and only two hours per occasion.

The 4 WD Recreationist -

The 4 WD owning RV recreationist is far more family oriented than is the motorcyclist. Only 7 to 12 percent do not recreate with their family. In most cases, the entire family participates, but if not, the most likely passenger is the wife or son. (Chevrolet *et al* 1973.)

FIGURE 25 -- RV RECREATIONISTS ACTIVITY PARTICIPATION IN CONJUNCTION WITH VEHICLE

Activities	Percent Participation 4 WD Owners	Percent Participation Dune Buggy Owners	Percent Participation Motorcycle Owners
Hunting	32	15	15
Fishing	28	2	14
Camping	89	99	39
Rockhounding	13	10	--
Sightseeing	82	99	49
Competition	33	45	53
Back Country Exploring	89	99	--
No interest in competition	--	--	47

1. Chevrolet *et al* 1973
2. Hamm 1973
3. Honda et al 1973

FIGURE 26--ACTIVITY PARTICIPATION BY ORV ORIENTATION TYPE ORDER OF PREFERENCE IN CALIFORNIA

Activities	Vehicles	Activity	Land
Hunting	5	7	5
Fishing	6	6	6
Camping	4	2	2
Rockhounding	-	1	7
Sightseeing	3	3	3
Competition	1	8	4
Back Country Exploring	2	4	1
Other	7	5	-

Sources: 1. Manufactures and Distributors of RV, including Honda, Kawashi, Yamaha, Suzuki, Ford, G.M., American Motors and International.

2. Personal interviews with representatives of RV clubs and associations and non-RV clubs and associations who were likely to be activity oriented.

FIGURE 27 NORMAL VS. REASONABLE ONE-WAY TRAVEL TIME TO USE AREA

Available Time	Less Than a Day		One Full Day		Two or Three Days	
Hour	Normal	Reasonable	Normal	Reasonable	Normal	Reasonable
Up to ½	32	36	9	8	4	3
½ to 1	27	30	15	24	3	5
1 to 2	15	14	36	36	13	22
2 to 4	5	3	18	10	38	36
4 +	1	1	1	1	19	13
No/ans	20	16	21	21	23	21
Total	100%	100%	100%	100%	100%	100%

Source: "Off-Highway Vehicle Use Survey," statewide studies section, California Department of Parks and Recreation 1972.

FIGURE 28 AVERAGE DAYS AND HOURS OF RV OPERATION PER MONTH

Days/Month No. Days	Weekend Days Sat	Sun	Hours Per Day Number	Response
0	1	1	0	0
1	19	18	1	1
2	28	27	2	4
3	11	12	3	7
4	12	16	4	14
5-6	3	4	5-6	34
7-8	1	1	7-8	18
8+	1	1	9-10	7
No/Ans	24	20	10+	3
			No/Ans	12
Total	100%	100%	Total	100%

Source: State Park Study, 1972.

The California Association of 4 WD clubs report indicates that trends of use vary from region to region. In general, use trends are dependent on nearness to the use area. Using a concentric circle approach, based on data taken from "Area Use Forms" completed for the association by its members, certain relationships were developed. Eighty five percent of the RV activities take place within 100 miles of the major population concentrations. Add 25 miles and an additional 9 percent is gained. Within 150 miles of the major population concentrations 96 percent of the Association's RV recreational activities occur.

For those who live in small communities and closer to use areas, patterns differ. Over 60 percent of their outings are one day in length and their travel distance is less than 100 miles from home. The remaining 40 percent of their outings require greater travel distance. The general trend is for the city dweller to travel further than those RV recreationists living in more remote communities.

With regard to other recreational vehicle ownership, the California Association of 4 WD clubs report indicates that 16 percent of their members own a pickup and 32 percent own trail bikes.

Dune Buggies (Reconstructed Vehicles)

Very little data is available regarding activity patterns of the dune buggy owner. Available information indicates that they enjoy activities and look for area characteristics similar to the vehicle and land oriented RV types.

Nearly 90 percent of the Dune Buggy owners recreational activities occur with a family member. Reference to Figure 25 indicates that dune buggies are used heavily for camping, back country exploring and sightseeing. It should be noted that their owners are more interested in competition and less likely to use the vehicles in activity oriented recreational activities than are the 4 WD vehicle owners. (Hamm 1973).

Participation patterns for the dune buggy enthusiast, as identified by the State Park Study, indicate that he is willing to travel greater distances to participate in his activity than other RV recreationists. The study indicated that the San Diego area has a disproportionately higher number of registered dune buggies.

The dune buggy owner is looking for sandy soil which is rare and localized in the desert. His average travel time to reach such an area is 3.1 hours and his average operating time per day is 6.6 hours. The dune buggy is also rather unique in that over 90 percent are towed to the use site by trailer. They are also equipped with lights for use at night.

Competitive Events -

In 1972 the Bakersfield and Riverside districts issued a total of 151 special land use permits for RV competitive events. Over 67,000 participants and nearly 190,000 spectators were involved in these events.

There are two general types of competitive events for which Special Land Use Permits (SLUPs) are issued. The majority of the SLUP's issued were to non-profit clubs and organizations. Nearly 68 percent of all SLUP's issued for competitive events are to non-profit clubs.

Unlike events hosted by non-profit clubs and organizations, professional promoters make all or part of their living by charging participants for entering the event, paying winners a portion of the purse, and keeping the remainder for operating expenses and profit. Thus, they have much to lose if competitive use were curtailed. Applications received indicate that forty-nine permits will be issued for this type of event in 1973. This is an increase of over 40 percent from the previous year. Applications for RV events are increasing at a rate in excess of 30 percent per year. Irrespective of the popularity of organized competitive RV events, compared to the total RV recreational picture, they represent less than 10 percent of RV activities.

3. Recreation Uses. Sightseeing, picnicking, camping, and other such activities are enjoyed by a great percentage of those who use the California Desert for recreation. But, these may be only a part of any one person's recreational experience. There are a multitude of specialized recreation activities that take place on the desert. Hunting, target shooting, rockhounding, archery, wilderness experiences, painting, photography, and many other diverse forms of recreation are important and appropriate uses of the desert land.

These specialized activities often present their own unique requirements. They may require a particular kind of area with certain geologic or atmospheric conditions, mountain climbing or sailplane flying for example. Or they may require the presence of particular resources such as wildlife for hunting, or certain minerals and gem stones for rockhounding.

In some instances today, these specialized uses conflict with other uses. Motorcyclists and wilderness hikers, hunters and birdwatchers, rockhounds and commercial mining developers, cross-country motorists and livestock raisers, are not necessarily compatible. As the use of the desert intensifies, these areas of conflict come into sharper focus, and physical or verbal clashes may occur.

Rockhounding is a desert use that is rapidly increasing. The participants who are often families or small groups are frequently well organized into clubs. This is an educational as well as a recreational activity, and should be encouraged.

However, there are those who misuse the desert resources, taking off much more material than they, themselves, can use and often for commercial purposes. Botanical specimens may suffer from this exhorbitant plunder, too. Other people remove irreplaceable geological, paleontological, or archeological objects.

Hunting is another activity that is enjoyed by many people in the desert. Since game animals are hunted under strict regulations to insure the ample perpetuation of wildlife species, this is a resource that will provide recreation on a continuing basis. There are, however, a certain number of people who are indiscriminate shooters. These people are neither serious sportsmen nor conservationists, and unfortunately, they are responsible for the destruction of countless signs, trash barrels, and anything else they can find to shoot at.

There are those who enjoy the desert for its unique qualities of solitude and silence. The desert can provide a unique kind of wilderness experience. Over-crowding may remove the wilderness experience. A human carrying capacity must be determined in the future.

Other forms of recreation activity that are becoming popular on the desert include: nature study and observation, distance (flight) archery shooting, sailplane (glider) flying, sand chariot sailing on dry lake beds, and rocket launching. Much camping on the desert is unique. Visitors may camp anywhere. They need not stay in a campground. In fact, many prefer to be away from the organization of a campground. They wish to feel unregimented.

4. Other Resource Uses. The other resource uses considered to be affected by the proposed action were grazing, educational, research, minerals and home site location. Home site location would be taking place on privately owned land. Therefore, the impacts would be indirect in the form of nuisance, noise, dust and possibly some erosion hazard from vegetative damage on adjoining public land. This is, in certain instances, significant in terms of public reaction. It is not quantified in any way.

Mineral Resource

Mineral resources are not significantly impacted by vehicular traffic. There may even be some beneficial effect in opening trails to areas and exposing subsurfaces.

The southern California Desert region is divided into three provinces: (1) Basin-Range, (2) Colorado Desert, and (3) Mojave Desert. Each of these provinces is a storehouse of unique geological occurrences and significant mineralization. The development of the mineral resource of each of the three provinces began with the earliest days of gold and silver mining. Many of the deposits were small and were soon depleted. The recent higher market price for gold and silver will motivate an increase in prospecting and mining claim locations.

The major mineral commodities now being produced are: saline minerals, talc, iron, cinders and decorative stone. Past production of copper, zinc, lead, and tungsten was important. Most of the mountain ranges of Mojave Desert Province have been surface prospecting for gold, silver, tungsten and manganese with varying degrees of success. During national emergencies many of these deposits were productive.

The principal producing deposits are: cement grade limestone at Victorville, iron at Eagle Mountain, rare-earth elements at Mountain Pass, and saline minerals at Bristol, Danby, and Koehn lakes, and specialty clays near Newberry Spring. The rare-earth deposit at the Mountain Pass Mine, in the Clark Mountain District, is the world's primary source of these elements. Copper exploration in the Whipple Mountains gives promise of an important deposit.

The mineral resources of the Colorado Desert are not of the variety and commercial quality as those found in the other deserts. Presently, market mineral commodities are: gypsum, sand and gravel, limestone, and volcanic decorative stone. The hot ground water of the southern Salton Basin is a promising source of geothermal energy.

There are few livestock ranches in the desert, but the few are large as a great deal of land is required to support each animal. Two adverse impacts have been experienced by those using public lands for livestock grazing. Harassment of cattle and sheep by vehicle operators has been mostly accidental and generally occurs around watering places. Of a more subtle nature, deterioration of vegetative and watershed resources

can reduce the forage production capability of the range. This has not had a widespread impact until now for the following reasons. The most intensive recreation vehicular activity has taken place in unsuitable areas for livestock grazing and on seasonal sheep ranges. The seasonal sheep ranges are based upon ephemeral forage or annuals which are only used when produced in abundance. Certain specific sites on cattle ranges in Kern County have been severely reduced in forage production. So far, these impacts have not accumulated to a level that would effect a reduction in a livestock grazing permit. To continue unmanaged recreation use as it has grown over the past few years would eventually result in alterations in grazing operations and reductions in permits.

Educational and research uses are being deteriorated to the extent that subject species or habitats are altered or damaged. This is subjective to the area to be seen or studied, the type of study and/or the objective of the field trip. Numerous college, high school and grade school classes use the desert for education and research.

RESEARCH NATURAL AREAS

The opportunity to perform long-term research on the natural environment of the earth in conditions relatively undisturbed is rapidly diminishing. The California Desert is one of those few remaining regions where these opportunities still exist and if protected can represent a priceless heritage for scientific study which could benefit mankind, both today and in the future.

The following is quoted from the forward statement of "A Directory of RESEARCH NATURAL AREAS on Federal lands of the United States of America Compiled by the Federal Committee on Research Natural Areas, 1968."

> "More than 300 natural areas set aside on Federal lands for scientific and educational purposes are described in this booklet. These areas represent examples of forest, range, and aquatic communities and geological features in natural or near-natural conditions. These areas on Federal lands are an important part of a system of natural areas made up not only of Federal but of State and private lands as well. And, as part of the International Biological Program, these will become a part of a worldwide system of natural areas.
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> Responsibility for natural areas on Federal lands rests largely with the Departments of Agriculture and Interior because they administer the majority of Federal lands. This booklet has been prepared by a committee of scientists from these two Departments with liaison membership from other interested agencies: The Smithsonian Institution, the Atomic Energy Commission, the Tennessee Valley Authority, and the Department of Defense.
>
> Research Natural Areas are important as baselines against which man-caused changes can be measured. They are useful for evaluating the improvement or impairment resulting from the intervention of man in the otherwise natural environment. The urgency for setting aside and protecting these areas becomes greater as our expanding population increases our demands on the land; as our concern for soil, water, and atmospheric pollution grows; and as far-reaching environmental controls, such as weather modication, become a reality."

Academic institutions have thus far recommended 33 areas for protection as research natural areas. The indiscriminate and uncontrolled use of vehicles in these areas, unquestionably will reduce their value for long term scientific study and in some cases intensive use could make them completely useless.

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F. POTENTIAL EFFECT OF RV'S ON INDIVIDUAL USE AREAS.

A specialized checklist was developed to systematically rate relative resource quality in one column and to rate potential off-road vehicle impact in another. At first only recreational vehicle impacts were rated. But, it was discovered that high impact on a low value resource resulted in the same rating as a high impact on a high value resource. Thus, the relative resource value column was added to more clearly lucidate the evaluation process.

The specialized environmental analysis checklist represents several levels of detail. The primary categories are: Non Living Environment, Living Environment, Ecological Interrelationships, Esthetics, Human Interest Values, and Access. The second, and more detailed level of generalization, includes soil associations, air quality, vegetation/wildlife habitats, vegetation, wildlife, ecological condition, noise, visual condition, archaeological features, historical sites, geological features, recreation uses, other uses, vehicle access, and people access. This level of generalization was used to rate the various candidate use zones throughout the desert. This level of detail is derived through an analysis and checklist of sub lists that occur under each of the above titles. For instance, under soil association, 25 different soils are listed. Under visual condition, 6 factors are listed. The various numbers and titles of other sub lists can be evaluated on the checklist.

The specialized checklist was designed to fit desert peculiarities, and to keep individual analyses of specific areas consistent and comparable.

1. Ratings. Each section of the environmental analysis was rated by the respective specialists and by other reviewers. This "multi-evaluator" approach is advantageous. It afforded the specialists an opportunity to give a "tunnel vision" evaluation of the resource he knows best. It also allows for a sounding board review by an allied specialist.

The rating of impacts and relative resource values depends on potential resource productivity, quality or size of the affected resource. Either of these may be most important in different area evaluations. For instance, a small area of riparian woodland habitat may attract RV enthusiasts and therefore, sustain high impact. Even though the riparian area might only cover 10 percent of the potential non-use area, it would be the overriding consideration in determining the value of that total area. In another situation, with three habitats of roughly equal potential impact, only the one covering 80 percent of the evaluated area would be controlling.

2. Validating The Rating And Checklist. A number rating system can be misleading. Some systems suggested that low potential impacts be rated on (1) medium two (2) and high (3). Number rating systems encourage mathematical adding or combining. A combined score of "high" soils impact (3) plus "low" wildlife damage (1) equals 4. A "medium" archaeological damage (2) plus "medium" aesthetic - visual degradation (2) also equals 4. These things, however, are not necessarily additive or comparative. Instead for resource impact the critical factor rating approach was favored. In the example above, perhaps the soil impact rating of 3 or "high" might be controlling. That is, if impacts on the soil are mitigated, then lesser but related impacts on other resources might likewise be reduced.

Thus, potential impacts on various environmental factors are shown by H (High), M (Medium), or L (Low). This avoids the problems of numbers described above.

Value judgments in rating are inevitable. There are various levels of validity and comprehensiveness of data. The low, medium, and high impact potential ratings were coupled with information sources as follows:

L, M, H — No additional letter - then rating was based on general undefined expert intuition - i.e. best guess (Note: expertise of rater)

LS, MS, HS — Rating based on on-site studies or research (cite specific reference).

LO, MO, HO — Rating based on on-site impressions or unsystematic observation by the rater

(Note: systematic observation by a schedule or visual transect would be included in "S" above)

LE, ME, HE — rating based on extrapolation from off-site studies or research (cite specific reference)

"?" = No rating is known, but the category seems applicable.

blank = Category is not applicable.

Ratings based on "On-site" studies or research are favored. These would not require us to guess or extrapolate information that may not be applicable.

3. Validity And Consistency. A wide search for on-site studies, both by academic and BLM personnel was conducted. Unfortunately, few were to be found. A few studies indirectly related to the desert were found. Some of these will be cited throughout this discussion. Ratings based on extrapolation from on-site studies or research and rating based on on-site impressions or unsystematic observation are potentially more valid than simple professional judgment or guess. Of course, where no supporting information exists, either a guess was entered or a question mark inserted. The guess indicates that the rater, through his awareness of nearby areas, was willing to extend a professional opinion. The question mark indicates that the rater considered the category is applicable but that he does not know enough about the resource or adjacent resources to make a guess.

Specialized criteria are required for rating each resource. Rating soils associations might be quite different than rating recreational resources. The ratings of high, medium and low impact on relative resource quality on soils would depend on a conscious awareness of potential soil productivity, chemical composition, water and air erodability, surface texture and a variety of other factors. The recreation uses rating may depend on considering a sense of wildness, of open space, of sociability, and other perceptions of the recreationist. Details of the rationale used for rating each resource follows later in this report.

AREA

#1 EUREKA DUNES

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 20%	M	1.
AM Adelanto/Mohave/Carlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand	LE 80%	L	
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			2.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES M			
Complete Examples of Common Geologic Features	L	L	Dunes
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	H	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub			3.
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			4.
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands	HO	H	
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

1 EUREKA DUNES

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation			
Wildflower Area	MO	H	5.
Cactus Area			
Unique or Threatened Species Present	HO	H	6.
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	HO	H	7.
Stressed Species Prairie Falcon	?	?	
Unique Microhabitat	MO	M	
Wildlife Improvements			
Stress			
Other Panamint Alligator Lizard			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HS	HS	8.
Processing or Special Use Sites	HO	H	9.
Rock Art	?	?	
Intaglios	HO	HO	10.
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	HO	HO	11.
Early Man	HO	HO	
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	HO	H	
Research Natural Area	HO	H	
Mines & Mining Resources	L	L	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

1 EUREKA DUNES

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	2	2	2	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	H	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS L		
	Paved Road to Area (yes/no)	NO	
	Maintained Graded Road to Area (yes/no)	NO	
	Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
	Approx. Miles to Main Highway	45	Highway 395
	Approx. Miles to Nearest Town	45	Big Pine
	Approx. Miles to Metropolitan Area	(1)240 (2)250	(1)S. Bernardino (2)L.A.
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	0	
	Approx. Miles of Graded Road Within Area	0	
	Approx. Miles of Trails and Non-Maintained Roads	2.5	
	Average Travel Time to Metropolitan Area	275 Mi 5.5 hrs	

1 EUREKA DUNES

1. Major portion low impact - low productivity. Area rated M for most critical soil type.

2. No downwind population centers. No outside source of pollution.

3. Off dunes - heaviest damage is to smaller shrub species.

4. Plants are vulnerable until fully mature. On dunes, damage will be done to a plant known only to this dune area.

5. When temperatures and moisture conditions are favorable, flowers bloom.

6. Unique: Ectosperma alexandrae Monotypic genus, only found in this dune complex. Unique species: Stanleya pinnata inyoensis Oenothera deltoides, variety Cineracea Ssp. eurekensis.

7. Desert Kit Fox frequents the area.

8. Extremely high potential for research. Large, late site.

9. Aboriginal irrigation ditches? (Patch 1951).

10. Rock alignments.

11. Dense obsidian scatter around dunes.

AREA

#2 NORTH SALINE VALLEY

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION $\boxed{M}$			
	AC Anthony/Cajon/Arizo	HE 20%	M	1.
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 25%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land	LE 40%	L	
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	TW Tortuga/Winona	HE 15%	L	
	AIR QUALITY $\boxed{L}$			
	In Urban Pollution Influenced Air Shed			2.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES $\boxed{M?}$			
	Complete Examples of Common Geologic Features	?	?	
	Paleontological Sites	?	H	3.
	Rock Collecting Sites	L	L?	
	Rare Geologic Features	L	L?	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS $\boxed{H}$			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	4.
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H*	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic	HO	H*	5.
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued) — RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION [H]			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present	LO	H	6.
Unique Microhabitat	H	H	7.
Other			
WILDLIFE [H]			
Unique/Threatened Species Pupfish	HO	H	
Stressed Species Kit Fox & Tortoise	LO	L	
Unique Microhabitat	HO	H	
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES — RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES [H]			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads	H	H	
Spring & Water Holes	H	H	
Forts	H	H	
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES [H]			
Occupational Sites	H	H	8.
Processing or Special Use Sites	H	H	
Rock Art	?	H	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	?	
Flake Scatters	?	H	
Early Man	?	?	
RESOURCE USES (Non-Recreational) [L]			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	L	
RECREATION FEATURES [H]			
Primitive Values	HO	H	9.
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

2 NORTH SALINE VALLEY

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS X				
Area Rugged with Challenging Terrain Features	2	2	2	
Feeling of Remoteness	3	3	3	
Size	2	2	2	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
Existence of Roads or Trails	3	3	3	
Specific Attractions	3	3	3	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	2	2	2	
Degree of Existing Damage	2	3	3	
Scenic Appeal	3	1	1	
Number and Degree of Restrictions	1	3	3	
Soil Types (Table IV)	3	2	2	
SUMMARY RATING	L	H	M	

ACCESS — VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS L		
Paved Road to Area (yes/no)	NO	
Maintained Graded Road to Area (yes/no)	YES	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	60	Highway 395
Approx. Miles to Nearest Town	60	Olancha
Approx. Miles to Metropolitan Area	220	
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	53	
Approx. Miles of Trails and Non-Maintained Roads	26	
Average Travel Time to Metropolitan Area	278Mi 5.5Hrs	

2 NORTH SALINE VALLEY

1. The final rating is the average of the high and low areas.
2. No downwind population centers and no outside source of pollution.
3. Early paleozoic marine sediments precambrian formation with oldest representation of Echinodermata (Helicoplacus).
4. Plants widely spaced ahd shrubby, where terrain permits vehicle passage.
5. R/A habitat attracts RV's making RV use greatest on most vulnerable sites. *Springs, seeps and washes are the key habitat centers in a desert area.
6. Eight endemic species of rare or limited destribution.
7. Riparian/Aquatic (Springs).
8. High density and variety of archaeological resources. (See Robareheck, 1972).
9. Practically all recreation users have RV's for access purposes.

AREA

#3 SALINE PANAMINT VALLEY

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 40%	M	
	AM Adelanto/Mohave/Garlock			Average of the high
	BL Badland			and low areas.
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR DuneLand			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 30%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land	LE 30%	L	
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			No downwind pop-
	Stationary Air Pollution Sources Nearby			ulation centers
	Other			
	GEOLOGICAL RESOURCES M			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	?	?	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	H	H	1.

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS H			
	Sagebrush Scrub			
	Shadscale Scrub	LO	L	2.
	Mojave Desert Creosote Bush	LO	L	
	Colorado Desert Creosote Bush			
	Alkali Sink	LO	L	
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic	HO	H	3.
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs Duneland	LO	L	
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

3 SALINE PANAMINT VALLEY

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation	LO	M	4.
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present	MO	M	
Unique Microhabitat	H	H	
Other Mesquite Stands			
WILDLIFE H			
Unique/Threatened Species	HO	H	Panamint Chipmunk
Stressed Species	LO	L	
Unique Microhabitat	HO	H	
Wildlife Improvements	HO	H	
Stress			
Other Raptor nests			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	H		
Mines	H		
Railroads	L		
Tramways	H		
Trails & Wagon Roads	H		
Spring & Water Holes	H		
Forts	L		
Early Highways	L		
Ghost Towns	H		
*E. L. Davis works (Indian ranch report UCLA, '67)			
ARCHAEOLOGICAL RESOURCES HS			
Occupational Sites	HS	HS	5.
Processing or Special Use Sites	HS	HS	*
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	H	
Flake Scatters	H	H	
Early Man	H	?	
RESOURCE USES (Non-Recreational) L			
Grazing	L	H	Pb, Ag, Am, Cn, Zm
Education			
Research Natural Area			
Mines & Mining Resources	L	H	Ph, Ag, Au, Cn & Zn
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

3 SALINE PANAMINT VALLEY

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	2	2	2	
	Size	2	2	2	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	3	3	3	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)				
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS L		
	Paved Road to Area (yes/no)	YES	
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked (yes/no) by Terrain	NO	
	Approx. Miles to Main Highway	45	
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	150/165	
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	18	
	Approx. Miles of Graded Road Within Area	16	
	Approx. Miles of Trails and Non-Maintained Roads	160	
	Average Travel Time to Metropolitan Area	227Mi 4.5hrs	

3 SALINE PANAMINT VALLEY

1. Ancient lake terraces.

2. Wet lands support tree and herbaceous species. Because of this attractive feature, the most vulerable habitat is the most heavily RV effected.

3. Spring and seep sites - potential high impact. Lake shore and marsh - potential moderate RV effects.

4. Within distribution area of 7 species of rare or limited distribution.

5. Extremely high in archaeological values.

AREA

#4 OLANCHA

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 10%	M	Ratings are average
	AM Adelanto/Mohave/Garlock			of high & low areas.
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakdale/Mottsville			
	DR Dune Land			
	DT Daggett/Tonopah/Bitter Spring	HE 50%	L	
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land	LE 40%	L	
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			2.
	Other			
	GEOLOGICAL RESOURCES M			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	H	H	3.
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	4.
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H	5.
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

4 OLANCHA

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION [L]			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	Sand Pea
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE [L]			
Unique/Threatened Species			
Stressed Species	LO		
Unique Microhabitat	LO		
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES [?]			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES [M] ?			
Occupational Sites	H?	M?	6.
Processing or Special Use Sites	M?	M?	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	M?	?	
Flake Scatters	H?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) [L]			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES [M]			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

4 OLANCHA

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS [X]				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	1	1	1	
	Size	2	2	2	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	L	L	L	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS [M]			
	Paved Road to Area	(yes/no)	YES	
	Maintained Graded Road to Area	(yes/no)	YES	
	Vehicle Access to Area Blocked by Terrain	(yes/no)	In most areas	
	Approx. Miles to Main Highway		Adjacent	
	Approx. Miles to Nearest Town		0	
	Approx. Miles to Metropolitan Area		170	
	Approx. Miles of Main Highway Within Area		0	
	Approx. Miles of Paved Road Within Area		0	
	Approx. Miles of Graded Road Within Area		15	
	Approx. Miles of Trails and Non-Maintained Roads		44	
	Average Travel Time to Metropolitan Area		180Mi 3.6hrs	

1. No downwind population centers.

2. Outside source of air pollution.

3. Fossils along shore of Owens Lake. Coso formation, type locality for species of early plestocene horse and genus of rodent.

4. Low because no general attractive features. Relative remoteness and low plant density.

5. Wildlife forage-cover important.

6. More archeological information needed, limited information presently available.

AREA

5 Darwin Falls

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 100%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			2.
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	M	H	Falls
Paleontological Sites			
Rock Collecting Sites	L	M	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic	HO	H	3.
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

5 Darwin Falls

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION H			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat	HO	H	
	Other			
	WILDLIFE H			
	Unique/Threatened Species			
	Stressed Species			
	Unique Microhabitat	HO	H	4.
	Wildlife Improvements			
	Stress			
	Other Wildlife species	HO		

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES ?			
	Occupational Sites	?	?	5.
	Processing or Special Use Sites	?	?	
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	?	?	
	Ceramic Scatters	?	?	
	Flake Scatters	?	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education			
	Research Natural Area			
	Mines & Mining Resources	LO	L	
	RECREATION FEATURES H			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas	HO	H	

AREA

5 Darwin Falls

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS				
Area Rugged with Challenging Terrain Features	1	1	1	
Feeling of Remoteness	1	1	1	
Size	1	1	1	
Travel Distance (Table III)	1	1	1	
Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
Existence of Roads or Trails	1	1	1	
Specific Attractions	3	3	3	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	1	1	1	
Scenic Appeal	3	3	3	
Number and Degree of Restrictions	1	1	1	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	L	L	L	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS I		
Paved Road to Area (yes/no)	No	
Maintained Graded Road to Area (yes/no)	No	
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	~~8 mi. to Hwy 136~~ ~~44 mi. to Hwy 395~~	
Approx. Miles to Nearest Town	8	Darwin
Approx. Miles to Metropolitan Area	230 mi. L.A.	~~San Bern. & Riv 150~~
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	230 mi. - 4.5 hrs.	

5 Darwin Falls

1. No outside source of air pollution.

2. No downwind population centers.

3. High because:

   (1) Attractive feature
   (2) Plants vulnerable

4. Off-road vehicle use will be concentrated by steep slopes into the most critical habitat area.

5. E. L. Davis mentions in notes that Falls are the closest live water source to Panamint Buttes area. If there is a site at the Falls, it should be unique.

AREA

6 Walker Pass/El Paso

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 10%	M	
	AM Adelanto/Mohave/Garlock	LE 25%	M	
	BL Badland	HE 10%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook	HE 35%	H	
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 20%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES H *			
	Complete Examples of Common Geologic Features	L	L?	
	Paleontological Sites	H	HS *	1.
	Rock Collecting Sites	L?	L?	
	Rare Geologic Features	L?	L?	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS H			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	HO	M	2.
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	HO	L	
	Pinyon Juniper Woodland			
	Mojave Desert Wash	HO	H	3.
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

6 Walker Pass/El Paso

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation	HO	H	
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present	MO	H	4.
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species			
Stressed Species			
Unique Microhabitat			
Wildlife Improvements	?	?	
XXXXX Other-Deer winter range	HO	H	
Other Game birds	MO	M	

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	HO	H	5.
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes	HO	H	
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HS	HS	6.
Processing or Special Use Sites	HS	HS	
Rock Art	M	H	
Intaglios	?	?	
Cemeteries/burials	H	H	
Trails	?	?	
Ceramic Scatters	H	H	
Flake Scatters	H	H	
Early Man	?	H	
RESOURCE USES (Non-Recreational) H			
Grazing	HO	H	
Education	HO	H	
Research Natural Area			
Mines & Mining Resources	L	L	
RECREATION FEATURES H			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas	HO	H	

AREA

6 Walker Pass/El Paso

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	M	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway	Through center of area	
	Approx. Miles to Nearest Town	10	China Lake
	Approx. Miles to Metropolitan Area	132	To Los Angeles
	Approx. Miles of Main Highway Within Area	17	
	Approx. Miles of Paved Road Within Area	6	
	Approx. Miles of Graded Road Within Area	24	
	Approx. Miles of Trails and Non-Maintained Roads	50	
	Average Travel Time to Metropolitan Area	132 mi. -	2.6 hrs.

1. Richardo, Goler and Bopesta formations (biggest lower pliocene fossil beds).

2. Heavy because:

   a. Joshua trees and general aspect attract.
   b. Plant density high.
   c. Terrain permit passage

3. Wildlife forage and cover.

4. Phacelia nashiana, Chorixanthe spinosa.

5. Walker Pass Historical District, National Register of Historical places.

6. Last Chance Canyon archaeological district on National Register of Historical places - extremely high density of archaeological resources.

AREA

7 Lone Tree Canyon

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook	HE 70%	H	
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain	ME 30%	L	
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	H?	Richardo FM?
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	1.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland	LO	L	
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland	LO	M	
Bristlecone Pine Forest			

7 Lonetree Canyon

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present	MO	H	2.
Unique Microhabitat	L	H	3.
Other			
WILDLIFE M			
Unique/Threatened Species			4.
Stressed Species			
Unique Microhabitat	L	H	5.
Wildlife Improvements	L	H	
Stress			
Other			6.

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			No information
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes		H	7.
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	?	?	8.
Processing or Special Use Sites	H	H	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	?	M	9.
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing	L	L	
Education	–	–	
Research Natural Area	–	–	
Mines & Mining Resources	L	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

7 Lone Tree Canyon

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	2	2	2	
	Size	2	2	2	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	L	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Int. 14	Adjacent
	Approx. Miles to Nearest Town	?	Mojave
	Approx. Miles to Metropolitan Area	100	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	100 mi.	2.0 hr.

7 Lonetree Canyon

1. a. Terrain features limit vehicle passage.
   b. Plants are shrubby.
   c. Density is high.
   d. Physical access is limited.

2. Chorizanthe spinosa, Phacelia nashiana.

3. Ponderosa Pine, isolated stands.

4. Good upland game habitat.

5. Water in Canyon Spring development.

6. No access to good or crucial sites.

7. Springs - but don't know if historical values.

8. Location and elevation suggests high probability for archy sites occurring.

9. Chipping sites - "The Factory".

AREA

8 Dove Springs

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock	LE 50%		
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook	HE 50%		
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			2.
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	H	H	3.
Rock Collecting Sites	–		
Rare Geologic Features	–		

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	HO	M	4.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland	HO	L	
Pinyon Juniper Woodland			
Mojave Desert Wash	MO	H *	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparal			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

* Wildlife forage and cover.

8 Dove Springs

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION H			
	Very Complete Example of Common Vegetation	HO	H	
	Wildflower Area	LO	M	
	Cactus Area			
	Unique or Threatened Species Present			5.
	Unique Microhabitat			
	Other			
	WILDLIFE H			
	Unique/Threatened Species			
	Stressed Species			
	Unique Microhabitat			
	Wildlife Improvements			
	Stress			
	Other Upland game	HO	H	

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES M			
	Occupational Sites	H	M?	6.
	Processing or Special Use Sites	H	?	
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	?	?	
	Ceramic Scatters	?	?	
	Flake Scatters	?	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) H			
	Grazing	HO	M	
	Education			
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES M			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas	MO	M	

AREA

8 Dove Springs

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	H	M	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	No	
	Maintained Graded Road to Area (yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	6	
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	132 Mi.	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	132 mi.	2.5 hrs.

8 Dove Springs

1. No urban air pollution source.

2. No nearby downwind population centers.

3. Classical late miocene locality in California.

4. Heavy because:

    a. Joshua Trees and general aspect attract visitors.
    b. Plant density is high.
    c. Terrain features permit limited passage.

5. Chorizanthe spinosa, Phacelia nashiana.

6. Site has potential but disturbance has been extreme.

AREA

9 Jawbone Canyon

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook	HE 80%	H	
CO Calpine/Oakglen/Mottsville	ME 10%	M	
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites	HE 5%	M	
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain	ME 5%	L	
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			1.
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	LO	L	
Paleontological Sites	HO	HS	Richardo formatior
Rock Collecting Sites	–	–	
Rare Geologic Features	–	–	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			2.
Shadscale Scrub			
Mojave Desert Creosote Bush	HO	M	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland	LO	L	
Pinyon Juniper Woodland			
Mojave Desert Wash	MO	H *	3.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	MO	H	4.
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present	MO	H	5.
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other Game birds	MO	H	

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES M			
Mining Camps	MO	H	
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes	HO	H	
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES ?			
Occupational Sites	?	?	6.
Processing or Special Use Sites	?	?	
Rock Art	?	?	
Intaglios	–	–	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing	HO	M	
Education			
Research Natural Area			
Mines & Mining Resources	LO	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

9 Jawbone Canyon

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	M	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	1 mi.	
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	132 Mi.	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	132 mi - 2.5 hr.	High potent, impact

9 Jawbone Canyon

1. No downwind population centers.

2. High because:

    a. Joshua trees attract visitors
    b. Plant density high
    c. Terrain features permits limited passage

3. Wildlife forage and cover.

4. Wildlife forage and cover.

5. Chorizanthe spinosa, Phacelia nashiana.

6. Extensive rock art on ranch in western portion of canyon; but rest of area is highly impacted.

AREA

10 Tortoise Preserve

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 35%	M	1.
	AM Adelanto/Mohave/Garlock	LE 25%	M	
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco	ME 20%	L	
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 10%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas	LE 10%	L	
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	?	?	Pleistocene sediment
	Rock Collecting Sites	L		
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS M			
	Sagebrush Scrub			2.
	Shadscale Scrub			
	Mojave Desert Creosote Bush	MO	M	
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	MO	L	
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

10 Tortoise Preserve

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	MO	H	3.
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			4.
Other			
WILDLIFE H			
Unique/Threatened Species			
Stressed Species	HO	H	5.
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other Other species	MO	H	6.

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	?	M	7.
Processing or Special Use Sites	?	M	
Rock Art	?	?	
Intaglios	L	L	
Cemeteries/burials	L	L	
Trails	L	L	
Ceramic Scatters	?	M?	
Flake Scatters	M	H?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	HO	H	
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES H			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

10 Tortoise Preserve

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS X				
Area Rugged with Challenging Terrain Features				
Feeling of Remoteness				
Size				
Travel Distance (Table III)				
Good Opportunity to Travel Cross-Country Without Roads or Trails				
Existence of Roads or Trails				
Specific Attractions				
Opportunity to Test Vehicle Performance				
Degree of Development				
Degree of Existing Damage				
Scenic Appeal				
Number and Degree of Restrictions				
Soil Types (Table IV)				
SUMMARY RATING	L	M	M	

ACCESS — VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS H		
Paved Road to Area (yes/no)	Yes	Borders area
Maintained Graded Road to Area (yes/no)	Yes	Borders area
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	7/1	Hwy 14/Sec. hwy.
Approx. Miles to Nearest Town	8	California City
Approx. Miles to Metropolitan Area	90/60	L.A./Bakersfield
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads	7.5	
Average Travel Time to Metropolitan Area	90 mi. 2 hrs	

10 Tortoise Preserve

1. The various areas were averaged together to come up with a medium impact rating.

2. Medium because:

   a. Many plants self-protecting but due to density will incur damage.
   b. Terrain only slightly restrictive.
   c. No general attractive features.

3. Various components of the vegetative cover might be eliminated by extremely heavy use.

4. Light RV activity might tend to increase wildflower production. Over-concentration might tend to inhibit wildflower production.

5. Destruction of natural habitat of a stressed species.

6. Disturbance during mating season and/or a short feeding season would work a hardship on this already depleted spp.

7. No sites recorded in area - archaeological resources probability appears low.

AREA

11 Rand Mountains/Spangler Hills

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 30%	M	
AH Adelanto/Mohave/Garlock			
BL Badland	HE 10%	L	
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco	ME 10%	L	
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 10%	L	
GR Granite Rockland	LE 20%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 20%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	?	Exten. pliocene dep.
Rock Collecting Sites	L	H	Mine dumps-outcrops
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	MO	M	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	Wildlife forage & cover
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

11 Rand Mountains/Spangler Hills

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	L	
Wildflower Area	MO	L	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			Desert tortoise
Stressed Species	MO	M	
Unique Microhabitat	MO	H	
Wildlife Improvements	HO	H	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps	LO	H	
Mines	LO	H	
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Ports			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	H	M	
Processing or Special Use Sites	H	M	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	L	L	
Flake Scatters	H	M	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing	LO	L	
Education			
Research Natural Area			
Mines & Mining Resources	L abc	HL b ab	2.
RECREATION FEATURES			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas	HO	L	

AREA

11 Rand Mountains/Spangler Hills

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	M	H	H	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS H			
	Paved Road to Area	(yes/no)	Yes	Highway 395
	Maintained Graded Road to Area	(yes/no)	Yes but limited	
	Vehicle Access to Area Blocked by Terrain	(yes/no)	No	
	Approx. Miles to Main Highway		Max 18 mi from most distant point	
	Approx. Miles to Nearest Town		18-20, Barstow,Randsburg,or Ridgecrest	
	Approx. Miles to Metropolitan Area		90/110	S.Berdo-Riv/L.A.
	Approx. Miles of Main Highway Within Area		100	
	Approx. Miles of Paved Road Within Area		50	
	Approx. Miles of Graded Road Within Area		150	
	Approx. Miles of Trails and Non-Maintained Roads		600	
	Average Travel Time to Metropolitan Area		110	2.2 hrs.

11 Rand Mountains/Spangler Hills

1. Although Randsburg - Johnannesburg lie to the southeast, buffer zoning will mitigate the possible impact of dust from use areas.

2. Tungsten, Feldspar, Salt, Ag, Au, Cu.

AREA

12 Randsburg - Johannesburg

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring	HE 20%	L	
	GR Granite Rockland	LE 80%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY H			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other	HO	H	1.
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	L	L	
	Rock Collecting Sites	LO	H	Outcrops-mine dumps
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	2.
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	L	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	L	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species	M	H	3.
Stressed Species			
Unique Microhabitat			
Wildlife Improvements	H	M	
Stress	H	L	
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES M			
Mining Camps	LO	H	
Mines	LO	H	
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	?	M?	4.
Processing or Special Use Sites	M?	M?	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	M?	M?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	LO	H	5.
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area	LO	H	
Hunting Areas			

AREA

12 Randsburg - Johannesburg

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	1	1	1	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	L	L	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Hwy. 395	
	Approx. Miles to Nearest Town		Randsburg
	Approx. Miles to Metropolitan Area	110	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	110 mi. 2.2 hrs.	High poten. Impact.

12 Randsburg - Johannesburg

1. Area surrounding populated area.
2. Much previous disturbance due to mineral extraction.
3. Desert tortoise, good upland game area. Many rodents, birds.
4. Man's mining activity would have long since damaged whatever might have been available.
5. Residential influence was primary consideration.

13 Trona Pinnacles

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo	HE 10%	M	1.
AM Adelanto/Mohave/Garlock	LE 10%	M	
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco	ME 30%	L	
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 10%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas	LE 40%	L	
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	HO	H	2.
Rock Collecting Sites	L	L	
Rare Geologic Features	HO	H	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	H	3.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs	LO	H	4.
Digger Pine Woodland			
Bristlecone Pine Forest			

13 Trona Pinnacles

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	L	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE L			
Unique/Threatened Species			
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	?	?	
Processing or Special Use Sites	M?	M?	
Rock Art	L?	L?	
Intaglios	L	L	
Cemeteries/burials	L	L	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	M	H	5.
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education	LO	H	
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

13 Trona Pinnacles

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	2	2	2	
	Size	1	1	1	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	No	
	Maintained Graded Road to Area (yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway	6	Highway 178
	Approx. Miles to Nearest Town	7.5	Westend
	Approx. Miles to Metropolitan Area		
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	150 mi 3.5 hr.	

13 TRONA PINNACLES

1. This area rated high because of its unusual fragile condition.

2. Type section for paleo-climatic studies.

3. Vegetative density less than 5% cover.

4. Pinnacles too massive to be damaged by vehicles; people may break off and haul away pieces.

5. Flaking sites recorded in area, one in center of pinnacles.

AREA

14 Red Mountain/Cuddeback

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 35%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco	ME 30%	L	
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 30%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas	LE 5%	L	
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	M	H	Small Playa
Paleontological Sites	M	L?	
Rock Collecting Sites	–		
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub	LO	L	1.
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic	HO	H	Spring sites
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

14 Red Mountain/Cuddeback

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	HO	H	Spring sites
Other			
WILDLIFE H			
Unique/Threatened Species			
Stressed Species	H	M	
Unique Microhabitat	H	M	Springs
Wildlife Improvements	H	M	Springs & guzzlers
Stress	H	M	
Other			Good upland game

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES ?			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	M	M	
Processing or Special Use Sites	M	M	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	M	M	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing	L	L	
Education			
Research Natural Area			
Mines & Mining Resources	L	H	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

14 Red Mountain/Cuddeback

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	2	2	2	
	Size	2	2	2	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	No	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	6	
	Approx. Miles to Nearest Town		Red Mountain
	Approx. Miles to Metropolitan Area	110	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	110	2.2 hr.

14 Red Mountain/Cuddeback

1. a. Plants shrubby and widely spaced.
   b. Terrain limits vehicular passage.
   c. No attractive features.

AREA

15 Fremont Peak

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 30%	M	1.
	AM Adelanto/Mohave/Garlock	LE 20%	M	
	BL Badland	HE 20%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco	ME 30%	L	
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	–		
	Paleontological Sites	?	?	
	Rock Collecting Sites	–		
	Rare Geologic Features	–		

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub	LO	L	2.
	Mojave Desert Creosote Bush	LO	L	
	Colorado Desert Creosote Bush			
	Alkali Sink	LO	L	
	Joshua Tree Woodland	LO	M	
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION I			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area	LO	L	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	-	-	Mojavè Ground Squirrel
Stressed Species	H	M	
Unique Microhabitat			
Wildlife Improvements	H	H	
Stress	H	M	
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES ?			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HE	HE	
Processing or Special Use Sites	H	H	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	H	
Flake Scatters	HE	HE	
Early Man	?	?	
RESOURCE USES (Non-Recreational) I			
Grazing	L	L	
Education			
Research Natural Area			
Mines & Mining Resources	L	?	
RECREATION FEATURES I			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

15 Fremont Peak

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS $\boxed{X}$				
	Area Rugged with Challenging Terrain Features	3	3		
	Feeling of Remoteness	2	2		
	Size	3	3		
	Travel Distance (Table III)	3	3		
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3		
	Existence of Roads or Trails	3	3		
	Specific Attractions	2	2		
	Opportunity to Test Vehicle Performance	3	3		
	Degree of Development	1	1		
	Degree of Existing Damage	2	2		
	Scenic Appeal	1	1		
	Number and Degree of Restrictions	1	1		
	Soil Types (Table IV)	2	2		
	SUMMARY RATING	$\boxed{M}$	$\boxed{M}$	$\boxed{M}$	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS $\boxed{H}$		
	Paved Road to Area (yes/no)	No	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	6	
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	90	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	90 mi.	1.8 hrs.

15 Fremont Peak

1. Not sure about boundaries for this area.

2. a. Plants shrubby and widely spaced.
   b. No general attractive features.

AREA

16 · Calico/Coyote Lake

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 15%	M	
AM Adelanto/Mohave/Garlock			
BL Badland	HE 5%	L	
BO Barstow/Oban/Hacienda	HE 10%	L	
BR Bull Trail/Roughbroken	HE 5%	M	
CH Calvista/Hivista/Cinco	ME 30%	L	
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 5%	L	
GR Granite Rockland	LE 5%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 20%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas	LE 5%	L	
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	M	H	Playa
Paleontological Sites	H	HS	2.
Rock Collecting Sites	M	H	3.
Rare Geologic Features	L?	L?	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	4.
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	5.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
~~Rock Outcrops/Cliffs~~ Duneland	MO	M	
Digger Pine Woodland			
Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present	LO	H	6.
Unique Microhabitat	?	H	Duneland habitat
Other			
WILDLIFE H			
Unique/Threatened Species			7.
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	LO	H	
Mines	LO	H	
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways	LO	H	
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HO	HS	8.
Processing or Special Use Sites	HO	HS	
Rock Art	HS	HS	9.
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	?	
Flake Scatters	HO	HS	Large number
Early Man	HO	HS	10.
RESOURCE USES (Non-Recreational) M			
Grazing	LO	L	
Education	MO	M	
Research Natural Area			
Mines & Mining Resources	L	H	Ag, Au, Clay, Stone
RECREATION FEATURES H			
Primitive Values			Incomplete
Camping Facilities	HO	M	
Resource Interpretation Sites	LO	H	
Rock Collecting Area	LO	H	
Hunting Areas	HO	L	

AREA

16 Calico/Coyote Lake

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	2	2	2	
	Feeling of Remoteness	2	2	2	
	Size	3	3	3	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	2	2	2	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	H	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	No	From I-15 to Kelso only
	Maintained Graded Road to Area (yes/no)	No	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway	25-50	
	Approx. Miles to Nearest Town		11.
	Approx. Miles to Metropolitan Area	150-175/210-235	SB, Riv./L.A.
	Approx. Miles of Main Highway Within Area	36	Highway 15
	Approx. Miles of Paved Road Within Area	12	
	Approx. Miles of Graded Road Within Area	160	
	Approx. Miles of Trails and Non-Maintained Roads	245	
	Average Travel Time to Metropolitan Area	150	3 hrs.

16 Calico/Coyote Lake

1. Some downwind urbanization.

2. Classic area for Barstovian land mammal age; Barstow formation, etc.

3. Ancient Indian sites.

4. a. Plants shrubby and widely spaced.
   b. Terrain limits vehicle passage in areas with attractive features.
   c. Much previous disturbance due to mineral extraction and military operations.

5. Wildlife forage and cover.

6. Eriophyllum mohavense, Astragalus jaegerianus, Dalea arborescens.

7. There are many habitats and species in the large area. Overall it must be rated high value.

8. Extremely rich in archeological resources.

9. Black Canyon, Murphy's Well, etc.

10. Calico Site - National Register of Historical Places. Coyote Playa Complex

11.

Baker	25
Essex	30
Ludlow	95
Barstow	15-75

AREA

17 Amargosa Canyon

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo	HE 10%	M	1.
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			2.
DT Daggett/Tonopah/Bitter Spring	HE 50%	L	
GR Granite Rockland	LE 40%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES M			
Complete Examples of Common Geologic Features	MO	M	3.
Paleontological Sites	HS	HS	4.
Rock Collecting Sites	–		
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	MO	H	5.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic	HO	H	6.
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION H			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present			7.
	Unique Microhabitat	HO	H	8.
	Other			
	WILDLIFE H			
	Unique/Threatened Species	HO	H	
	Stressed Species	LO	?	
	Unique Microhabitat	HO	H	
	Wildlife Improvements			
	Stress	H	H	
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES H			
	Mining Camps			
	Mines			
	Railroads	MO	H	
	Tramways			
	Trails & Wagon Roads	H	H	
	Spring & Water Holes	H	H	
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	H	HS	9.
	Processing or Special Use Sites	H	HS	10.
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	?	?	
	Ceramic Scatters	H	H	
	Flake Scatters	H	H	
	Early Man	H	H	
	RESOURCE USES (Non-Recreational) M			
	Grazing	MO	H	
	Education	MO	H	
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES H			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites	HO	H	
	Rock Collecting Area			
	Hunting Areas	MO	L	

AREA

17 Amargosa Canyona

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	No	
	Maintained Graded Road to Area (yes/no)	No	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway	7-10	Highway 127
	Approx. Miles to Nearest Town	22	Tecopa
	Approx. Miles to Metropolitan Area	160	San Berdo.,Riverside
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	0	
	Approx. Miles of Graded Road Within Area	9	
	Approx. Miles of Trails and Non-Maintained Roads	19	
	Average Travel Time to Metropolitan Area	207	4.1 hrs.

17 Amargosa Canyon

1. This was considered high because its major areas are high impact.

2. This is an area that might be separated into a high and low area.

3. Mud Hills - Vertical bluffs.

4. Tecopa formation, first good fossil fauna for middle pleistocene life in Mojave Desert.

5. Vegetated with saltgrass. A tough species but enough pressure will damage it.

6. Because of Riparian vegetation - attractive area vulnerable by terrain features.

7. Oxystylis lutea, Cordylauthus tecopensis.

8. Unique because of abundance of water.

9. Nominated for National Register of Historical Places. China Ranch locality.

10. Sleeping circles, etc.

AREA

18 Dumont Dunes N.W.

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand	LE 100%	L	
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	H	Sand Dune

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	2.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
~~XXXXXXXXXXXXXXX~~ Duneland	LO	M	

AREA

18 Dumont Dunes N.W.

Living Environment (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	M	3.
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	?	M	
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species	LO	L	Salt creek spr.
Unique Microhabitat	HO	H	
Wildlife Improvements			
Stress			
Other			

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps	L		
Mines	L		
Railroads	H		
Tramways	L		
Trails & Wagon Roads	H		4.
Spring & Water Holes	H		
Forts	L		
Early Highways	H		
Ghost Towns	L		
ARCHAEOLOGICAL RESOURCES ?			
Occupational Sites	?	?	5.
Processing or Special Use Sites	?	?	
Rock Art	?	?	
Intaglios	–	–	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) M			
Grazing			
Education	MO	M	
Research Natural Area	MO	M	
Mines & Mining Resources	L	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

18 Dumont Dunes NW

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	1	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	3	2	3	
	Soil Types (Table IV)	3	2	2	
	SUMMARY RATING	H	M	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	Yes	Highway 127
	Maintained Graded Road to Area (yes/no)	No	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town	22	Tecopa
	Approx. Miles to Metropolitan Area	160	S. Ber./Riv. 220 to LA
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	0	
	Approx. Miles of Graded Road Within Area	0	
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	207	4.1 hrs.

18 Dumont Dunes N.W.

1. No downwind population centers.
2. Low because of low plant density.
3. Individuality of dune area.
4. Salt Spring, Spanish Trail, T&T Railroad.
5. No information for dunes.

AREA

#19 DUMONT DUNES

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION H			
	AC Anthony/Cajon/Arizo	HE 60%	M	
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring	HE 10%	L	
	GR Granite Rockland	LE 10%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas	LE 10%	L	
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito	MS 10%	L	
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES H			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	H?	H?	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	H	Dunes

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs Duneland	LO	M	
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

19 DUMONT DUNES

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	?	H	2.
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species	M	H	
Unique Microhabitat	M	H	
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	L		
Mines	L		
Railroads	H		
Tramways	L		
Trails & Wagon Roads	H		
Spring & Water Holes	H		
Forts	L		
Early Highways	H		
Ghost Towns	L		
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	H	H	3.
Processing or Special Use Sites	H	H	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	H	
Flake Scatters	H	H	
Early Man	H	H	
RESOURCE USES (Non-Recreational) M			
Grazing			
Education	MO	M	
Research Natural Area	MO	M	
Mines & Mining Resources	LO	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			Good camping site
Resource Interpretation Sites			Sight seeing, photo.
Rock Collecting Area			
Hunting Areas			

AREA

19 DUMONT DUNES

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS X				
Area Rugged with Challenging Terrain Features				
Feeling of Remoteness				
Size				
Travel Distance (Table III)				
Good Opportunity to Travel Cross-Country Without Roads or Trails				
Existence of Roads or Trails				
Specific Attractions				
Opportunity to Test Vehicle Performance				
Degree of Development				
Degree of Existing Damage				
Scenic Appeal				
Number and Degree of Restrictions				
Soil Types (Table IV)				
SUMMARY RATING	H	M	H	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS M		
Paved Road to Area (yes/no)	YES	Highway 127
Maintained Graded Road to Area (yes/no)	NO	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	Adjacent	
Approx. Miles to Nearest Town	22	Tecopa
Approx. Miles to Metropolitan Area		
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads	24	
Average Travel Time to Metropolitan Area	207 4.1	

19 DUMONT DUNES

1. No downwind population centers.
2. Individuality of dune area.
3. Dense site cluster around salt spring.

AREA

#20 KINGSTON MOUNTAINS

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION [L]			
	AC Anthony/Cajon/Arizo	HE 10%	M	
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 90%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY [L]			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES [H]			
	Complete Examples of Common Geologic Features	LO	H	
	Paleontological Sites	?	HE	1.
	Rock Collecting Sites	LO	H	
	Rare Geologic Features			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS [M]			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	2.
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	MO	M	
	Pinyon Juniper Woodland	LO	H	
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic	HO	H	
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION [L]			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area			
Cactus Area	LO	M	
Unique or Threatened Species Present	LO	H	3
Unique Microhabitat			
Other			
WILDLIFE [M]			
Unique/Threatened Species	L	H	No Access
Stressed Species	HO	H	
Unique Microhabitat			
Wildlife Improvements	LO	H	
Stress			
Other			

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES [?]			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES [H]			
Occupational Sites	H	H	
Processing or Special Use Sites	H	H	
Rock Art	H	H	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	H	
Ceramic Scatters	?	?	
Flake Scatters	H	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) [H]			
Grazing	HO	H	
Education			
Research Natural Area			
Mines & Mining Resources	LO	H	
RECREATION FEATURES [L]			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area	LO	H	
Hunting Areas	LO	MO	

AREA

20 KINGSTON MOUNTAINS

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features				
	Feeling of Remoteness				
	Size				
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS L		
	Paved Road to Area (yes/no)	NO	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	220	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	220 4.4	

<u>20 KINGSTON MOUNTAINS</u>

1. High probability for the mid-pliestocene.

2. Rough terrain.

3. <u>Penstemon</u> <u>stephensii</u>, <u>Potentilla</u> <u>patelifera</u>.

AREA

#21 IVANPAH VALLEY

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 55%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Ob[illegible]/[illegible]cienda			
BR Bull Trail/[illegible]rcken			
CH Calvista/[illegible] Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 45%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			2. (a)
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	M	
Colorado Desert Creosote Bush			(b)
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

21 IVANPAH VALLEY

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species	MO	H	Fairy Shrimp
Stressed Species	MO	H	
Unique Microhabitat			
Wildlife Improvements	HO	H	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	L		
Mines	L		
Railroads	L		
Tramways	L		
Trails & Wagon Roads	L		
Spring & Water Holes	L		
Forts	L		
Early Highways	L		
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	H	H	
Processing or Special Use Sites	H	H	
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	H	
Flake Scatters	H	H	
Early Man	H	H	
RESOURCE USES (Non-Recreational) L			
Grazing	LO	L	
Education			
Research Natural Area			
Mines & Mining Resources	L	H	3.
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

21 IVANPAH VALLEY

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	1	1	1	
	Size	2	2	2	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS L		
	Paved Road to Area (yes/no)	NO	
	Maintained Graded Road to Area (yes/no)	NO	
	Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
	Approx. Miles to Main Highway	2	Highway 15
	Approx. Miles to Nearest Town	7	Wheaton Springs
	Approx. Miles to Metropolitan Area	1) 170 2) 230	1) S.B. 2) L.A.
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	0	
	Approx. Miles of Graded Road Within Area	4	
	Approx. Miles of Trails and Non-Maintained Roads	45	
	Average Travel Time to Metropolitan Area	230 4.6	

21 IVANPAH VALLEY

1. Lies across a major highway.

2. (a) Plants are shrubby but too dense for complete avoidance.

   (b) Terrain features limit cross country passage on the slopes.

3. Rare earths, lead, zinc, limestone, mica.

AREA

#22 CLARK MOUNTAIN

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo	HE 5%	M	
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring	HE 10%	L	
	GR Granite Rockland	LE 85%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			West of Mtn. Pass
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	LO	M	1.
	Paleontological Sites	LO	L	
	Rock Collecting Sites	LO	L	
	Rare Geologic Features	LO	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS M			
	Sagebrush Scrub			
	Shadscale Scrub			2.
	Mojave Desert Creosote Bush	MO	M	
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	MO	H	
	Pinyon Juniper Woodland	MO	H	
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest	LO	H	3.
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

22 CLARK MOUNTAIN

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area	LO	H	4.
Unique or Threatened Species Present	LO	H	5.
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species	HO	H	
Stressed Species	LO	L	
Unique Microhabitat	HO	H	
Wildlife Improvements	MO	M	
Stress			
Other			

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	M	H	6.
Processing or Special Use Sites	M	H	
Rock Art	H	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	L	H	
Ceramic Scatters	?	?	
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	LO	M	
RECREATION FEATURES M	MO	H	
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas	LO	H	

AREA

22 CLARK MOUNTAIN

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS [X]				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	L	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS [L]		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	3	Interstate 15
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	230	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	230	4.6

22 CLARK MOUNTAIN

1. Clark Mountain Fault. Large open pit mine being developed for rare earth elements.

2. Relatively dense shrub cover will sustain little damage since it poses a threat to vehicles.

3. Slope and stature of dominant species will not permit heavy impact.

4. *Lesquerella kingii bernardina*.

5. Unique and rare cactus species would suffer to some degree. Fir trees might be damaged by man caused fires.

6. Rated M due to topographic limits on site accessibility.

AREA

#23 EASTERN MOJAVE

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 52%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco	ME 2%	L	
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 1%	L	
GR Granite Rockland	LE 20%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 10%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash	LE 15%	L	
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	HO	H	
Paleontological Sites	HS	HS	
Rock Collecting Sites	LO	H	
Rare Geologic Features	HO	H	Cima Dome

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub	HO	H	
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland	MO	H	
Pinyon Juniper Woodland	LO	H	
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic	HO	H	
Live Oak Woodland	LO	H	
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands	LO	H	
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation	HO	H	
Wildflower Area	MO	L	
Cactus Area	LO	M	
Unique or Threatened Species Present	LO		1.
Unique Microhabitat	HO	H	
Other			
WILDLIFE H			
Unique/Threatened Species	M	H	
Stressed Species	M	H	
Unique Microhabitat	H	H	2.
Wildlife Improvements	M	H	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads	H	H	3.
Spring & Water Holes	H	H	
Forts	H	H	
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	M?	H	4.
Processing or Special Use Sites	HS	HS	5.
Rock Art	HS	HS	6.
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	H	
Flake Scatters	M	H	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing	M	H	
Education	M	H	
Research Natural Area	H	H	
Mines & Mining Resources	L	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

23 EASTERN MOJAVE

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features				
	Feeling of Remoteness				
	Size				
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS L			
	Paved Road to Area	(yes/no)	NO	
	Maintained Graded Road to Area	(yes/no)	NO	
	Vehicle Access to Area Blocked by Terrain	(yes/no)	NO	
	Approx. Miles to Main Highway		33	Highway 40
	Approx. Miles to Nearest Town		50	Needles
	Approx. Miles to Metropolitan Area			
	Approx. Miles of Main Highway Within Area		0	
	Approx. Miles of Paved Road Within Area		0	
	Approx. Miles of Graded Road Within Area		12	
	Approx. Miles of Trails and Non-Maintained Roads		121	
	Average Travel Time to Metropolitan Area			3 - 5 hours to L.A.

23 EASTERN MOJAVE

1. Opuntia basilaris brachyclada Androstephium breviflorum, Linanthus arenicola, Astragalus cimae, Lesquerella kingii bernardina, Phacelia nashiana, Calochortus striatus, Penstemon calcareus.

2. Excellent area for diverse species - Designated Roads and Trails can protect resource values.

3. Piute Pass historical discrict. Natural Register of Historical Places.

4. One of the most dense site areas in the California Desert. Great concentration of petroglyphs.

5. Rockshelters being potted.

6. Petroglyphs being vandalized.

AREA

24 KELSO DUNES

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	Compaction
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	MO	H	Compaction
Other			
WILDLIFE H			
Unique/Threatened Species	HS	H	
Stressed Species			
Unique Microhabitat	HO	H	
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H ?			
Occupational Sites	H?	HE	5.
Processing or Special Use Sites	H?	HE	
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	?	
Flake Scatters	H	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing	LO	M	
Education	HO	H	
Research Natural Area	HO	H	
Mines & Mining Resources	LO	L	
RECREATION FEATURES M			
Primitive Values			Incomplete
Camping Facilities			
Resource Interpretation Sites	HO	H	
Rock Collecting Area	LO	H	
Hunting Areas			

#24 KELSO DUNES

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION $\boxed{L}$			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland	LE 100%	L	
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY $\boxed{L}$			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES $\boxed{L}$			
Complete Examples of Common Geologic Features	LO	L	
Paleontological Sites	LO	L	
Rock Collecting Sites	LO	L	
Rare Geologic Features Dunes	LO	H	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS $\boxed{L}$			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	2.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			3.
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H*	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			4.
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands Galleta on Dunes	MO	M	
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
~~Bristlecone Pine Forest~~ Forbs	?	M	Compaction

AREA

24 KELSO DUNES

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	M	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	YES	
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
	Approx. Miles to Main Highway	45	Via paved road
	Approx. Miles to Nearest Town	6	Kelso
	Approx. Miles to Metropolitan Area	180	
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads	27	
	Average Travel Time to Metropolitan Area	3.5	

24 KELSO DUNES

1. No downwind population centers.

2. Shrubby species normally avoided.

3. Wildlife forage and cover but little vegetation to damage.

4. Some plants are destroyed. Compaction effect upon replacement.

5. Peripheral area contains archaeological resources.

AREA

#25 MOJAVE BASIN

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 20%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda	HE 15%	L	
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 10%	L	
GR Granite Rockland	LE 10%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas	LE 15%	L	
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito	ME 30%	L	
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	M	
Rock Collecting Sites	LO	H	
Rare Geologic Features	L	H	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H*	Wildlife Forage&Cov.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
~~Bristlecone Pine Forest~~ Duneland	MO	M	

24 KELSO DUNES

1. No downwind population centers.
2. Shrubby species normally avoided.
3. Wildlife forage and cover but little vegetation to damage.
4. Some plants are destroyed. Compaction effect upon replacement.
5. Peripheral area contains archaeological resources.

AREA

#25 MOJAVE BASIN

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION $\boxed{M}$			
AC Anthony/Cajon/Arizo	HE 20%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda	HE 15%	L	
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 10%	L	
GR Granite Rockland	LE 10%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas	LE 15%	L	
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito	ME 30%	L	
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY $\boxed{L}$			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES $\boxed{L}$			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	M	
Rock Collecting Sites	LO	H	
Rare Geologic Features	L	H	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS $\boxed{L}$			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H*	Wildlife Forage&Cov.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
~~Bristlecone Pine Forest~~ Duneland	MO	M	

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
L VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	?	H	
Other			
WILDLIFE H High in Afton/Zzyzx			
Unique/Threatened Species	LO	L	Transient Bighorn
Stressed Species			
Unique Microhabitat	?	?	
Wildlife Improvements	H	H	Afton & Zzyzx
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	H	H	
Mines			
Railroads Tonapah & Tidewater			
Tramways			
Trails & Wagon Roads Old Government Road			
Spring & Water Holes			
Forts FT Soda			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	H	HO	
Processing or Special Use Sites	H	HO	
Rock Art	H	H	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	HO	
Flake Scatters	HO	HO	
Early Man	H	HS	Mojave/Playa Cultural Complex
RESOURCE USES (Non-Recreational) L			
Grazing	LO	L	
Education			
Research Natural Area			
Mines & Mining Resources	LO	L	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area	LO	M	
Hunting Areas	HO	L	

AREA

25 MOJAVE BASIN

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	YES	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		Interstate 15
	Approx. Miles to Nearest Town		Baker
	Approx. Miles to Metropolitan Area	190 Miles	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	190 Miles	3.8

#26 EL MIRAGE LAKE

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION :			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/[illegible]broken			
CH Calvista/[illegible]/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas	LE 100%	L	
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub	LO	L	1.
Mojave Desert Creosote Bush	LO	M	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland	LO	H	
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H*	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

26 EL MIRAGE LAKE

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION L			
	Very Complete Example of Common Vegetation	LO	M	2.
	Wildflower Area	LO	H	
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat			
	Other			
	WILDLIFE L			
	Unique/Threatened Species	L	H	Desert Tortoise
	Stressed Species			
	Unique Microhabitat			
	Wildlife Improvements			
	Stress			
	Other			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES L			
	Occupational Sites	H	L	3.
	Processing or Special Use Sites	H	M	
	Rock Art	?	?	
	Intaglios	L	L	
	Cemeteries/burials	?	?	
	Trails	L	L	
	Ceramic Scatters	H	L?	
	Flake Scatters	H	L?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing	L	L	
	Education			
	Research Natural Area			
	Mines & Mining Resources	L	L	
	RECREATION FEATURES H			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

26 EL MIRAGE LAKE

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS X				
	Area Rugged with Challenging Terrain Features				
	Feeling of Remoteness				
	Size				
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING	H	L	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	YES	Highway 395
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked (yes/no) by Terrain	NO	
	Approx. Miles to Main Highway	Through center of area	
	Approx. Miles to Nearest Town	20	Adalanto and Boron
	Approx. Miles to Metropolitan Area	1)60 2)160	1)S.Brdo. 2) L.A.
	Approx. Miles of Main Highway Within Area	18	Highway 395
	Approx. Miles of Paved Road Within Area	18	
	Approx. Miles of Graded Road Within Area	80	
	Approx. Miles of Trails and Non-Maintained Roads	300	
	Average Travel Time to Metropolitan Area	107	2.1

<u>26 EL MIRAGE LAKE</u>

1. Low because: (a) Plants are sparse and many are large enough to be self protecting. (b) General attractive feature is dry lake bed.

2. There can be very good wildflower displays in this area.

3. Extensive existing impact.

#27 SHADOW MOUNTAINS

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 50%	M	
	AM Adelanto/Mohave/Garlock			
	BL Badland	HE 10%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco	ME 40%	L	
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other East of Hwy. 395			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	M	Playa
	Paleontological Sites	L	L	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

LIVING ENVIRONMENT	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION/WILDLIFE HABITATS H			
	Sagebrush Scrub			1. & 2.
	Shadscale Scrub			
	Mojave Desert Creosote Bush	HO	M	
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	LO	M	
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			

AREA

27 SHADOW MOUNTAINS

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation			
Wildflower Area	MO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	H	H	3.
Stressed Species	LO	L	
Unique Microhabitat			
Wildlife Improvements	HO	H	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES I			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	H?	M	
Processing or Special Use Sites	H	M	
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails			
Ceramic Scatters	H	M?	
Flake Scatters	H	M	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

27 SHADOW MOUNTAINS

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS X				
Area Rugged with Challenging Terrain Features	1	1	1	
Feeling of Remoteness	1	1	1	
Size	3	3	3	
Travel Distance (Table III)	3	3	3	
Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
Existence of Roads or Trails	3	3	3	
Specific Attractions	1	1	1	
Opportunity to Test Vehicle Performance	2	2	2	
Degree of Development	1	1	1	
Degree of Existing Damage	1	1	1	
Scenic Appeal	1	1	1	
Number and Degree of Restrictions	1	1	1	
Soil Types (Table IV)	2	2	2	
SUMMARY RATING	M	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS H		
Paved Road to Area (yes/no)	YES	
Maintained Graded Road to Area (yes/no)	YES	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	Through center of Area	
Approx. Miles to Nearest Town	20	
Approx. Miles to Metropolitan Area	60/120	S. Brdno./ Los Angeles
Approx. Miles of Main Highway Within Area	18	
Approx. Miles of Paved Road Within Area	18	
Approx. Miles of Graded Road Within Area	80	
Approx. Miles of Trails and Non-Maintained Roads	300	
Average Travel Time to Metropolitan Area	107	2.1

27 SHADOW MOUNTAINS

1. High because: (a) Dry lake attraction El Mirage. (b) Vehicle passage not limited.

2. Wildlife and forage cover - some plants self protecting.

3. Mojave ground squirrel is threatened species.

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION $\boxed{L}$			
AC Anthony/Cajon/Arizo	HE 10%	M	
AM Adelanto/Mohave/Garlock	LE 70	M	1.
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 10%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites	LE 10%	L	
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY $\boxed{L}$			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES $\boxed{L}$			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS $\boxed{L}$			
Sagebrush Scrub			
Shadscale Scrub	LO	L	2.
Mojave Desert Creosote Bush	LO	M	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland	LO	M	
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	3.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

28 KRAMER HILLS/IRON MOUNTAIN

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION L			
	Very Complete Example of Common Vegetation	LO	M	4.
	Wildflower Area	LO	H	
	Cactus Area			
	Unique or Threatened Species Present	LO	H	Cymopterus deserticola
	Unique Microhabitat			
	Other			
	WILDLIFE H			
	Unique/Threatened Species	HO	H	5.
	Stressed Species	HO	?	
	Unique Microhabitat			
	Wildlife Improvements	HO	H	
	Stress			
	Other			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES L			
	Occupational Sites	L	L	6.
	Processing or Special Use Sites	H	M	
	Rock Art			
	Intaglios			
	Cemeteries/burials	?	?	
	Trails			
	Ceramic Scatters	L	L	
	Flake Scatters	H	L	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education			
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

28 KRAMER HILLS/IRON MOUNTAIN

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS $\boxed{X}$				
Area Rugged with Challenging Terrain Features	1	1	1	
Feeling of Remoteness	2	2	2	
Size	3	3	3	
Travel Distance (Table III)	3	3	3	
Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
Existence of Roads or Trails	3	3	3	
Specific Attractions	1	1	1	
Opportunity to Test Vehicle Performance	2	2	2	
Degree of Development	1	1	1	
Degree of Existing Damage	1	1	1	
Scenic Appeal	1	1	1	
Number and Degree of Restrictions	1	1	1	
Soil Types (Table IV)	3	3	3	
SUMMARY RATING	$\boxed{H}$	$\boxed{H}$	$\boxed{M}$	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS $\boxed{H}$		
Paved Road to Area (yes/no)	YES	
Maintained Graded Road to Area (yes/no)	YES	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	Through Center of Area	
Approx. Miles to Nearest Town	20	
Approx. Miles to Metropolitan Area	60/120	S Brdno./Los Angeles
Approx. Miles of Main Highway Within Area	18	
Approx. Miles of Paved Road Within Area	18	
Approx. Miles of Graded Road Within Area	80	
Approx. Miles of Trails and Non-Maintained Roads	300	
Average Travel Time to Metropolitan Area	107	2.1

28 KRAMER HILLS/IRON MOUNTAIN

1. This area was rated low because of the large % of low.

2. Low because: (a) Plants are sparse and many are self protecting.
   (b) No general attractive features.

3. Wildlife forage and cover.

4. There are very good wildflower displays in the area.

5. Mojave Ground Squirrel habitat needs study. Threatened species.

6. Archaeological resources already impacted.

#29 STODDARD VALLEY

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 50%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 5%	L	
GR Granite Rockland	LE 45%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	MO	M	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H*	*W/life forage-Cover
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

29 STODDARD VALLEY

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	MO	M	
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present	MO	H	Eriophy llum mojavense
Unique Microhabitat			Dalea arbaresense
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species	MO	H	Desert tortoise
Unique Microhabitat			
Wildlife Improvements	MO	H	Upland Game Waters
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES L			
Occupational Sites	L	L	
Processing or Special Use Sites	L	L	
Rock Art	L	L	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	L	?	
Flake Scatters	L	L	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			Au, Limestone
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

29 STODDARD VALLEY

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	2	2	2	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	YES	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		Interstate 15
	Approx. Miles to Nearest Town		Barstow
	Approx. Miles to Metropolitan Area	110	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	110	2.1

AREA

#30 UPPER JOHNSON VALLEY

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 60%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 40%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub			1.
Shadscale Scrub			
Mojave Desert Creosote Bush	HO	L	
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	L	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
~~Bristlecone Pine Forest~~ Playa	LO	L	

AREA

30 UPPER JOHNSON VALLEY

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	L	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species	M	L	2.
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES L			
Occupational Sites	L	L	3.
Processing or Special Use Sites	L	L	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	?	
Flake Scatters	L	L	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

30 UPPER JOHNSON VALLEY

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	O R V O R I E N T A T I O N T Y P E			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	L	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	NO	
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	5	
	Approx. Miles to Nearest Town	15	Lucerne Valley
	Approx. Miles to Metropolitan Area	130	
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	130	2.6

30 UPPER JOHNSON VALLEY

1. Medium because: (a) Soggy dry lake attracts visitors. (b) 50% of plants small enough to be vulnerable. (c) Terrain allows free passage.

2. Rodents and reptiles primary inhabitants - some upland game areas.

3. Archaeological value in area is low expecially when outside five mile radius from water.

AREA

#31 BIGELOW CHOLLA

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo	HE 20%	M	1.
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 5%	L	
GR Granite Rockland	LE 75%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
~~Bristlecone Pine Forest~~ Cactus Forest	LO	H	2.

AREA

31 BIGELOW CHOLLA

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	H	3.
Wildflower Area			
Cactus Area	LO	H	
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE L			
Unique/Threatened Species			
Stressed Species	LO	L	
Unique Microhabitat	LO	M	4.
Wildlife Improvements			
Stress			
Other Wildlife Species	L		

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES L			
Occupational Sites	L	L	
Processing or Special Use Sites	L	L	
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	L	?	
Ceramic Scatters	L	L	
Flake Scatters	L	L	
Early Man	L	L	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	L	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

31 GIBELOW CHOLLA

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS X				
Area Rugged with Challenging Terrain Features	1	1	1	
Feeling of Remoteness	1	1	1	
Size	1	1	1	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
Existence of Roads or Trails	1	1	1	
Specific Attractions	3	3	3	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	1	1	1	
Scenic Appeal	3	3	3	
Number and Degree of Restrictions	1	1	1	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	L	M	L	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS L		
Paved Road to Area (yes/no)	YES	U.S. 66
Maintained Graded Road to Area (yes/no)	NO	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway		Adjacent
Approx. Miles to Nearest Town	18	Needles
Approx. Miles to Metropolitan Area	186	Riv. /S. Bernardino
Approx. Miles of Main Highway Within Area	3	
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads	?	
Average Travel Time to Metropolitan Area	250	Low Impact

31 BIGELOW CHOLLA

1. (a) This area was averaged together to come up with the average impact rating. (b) This area could be moved to the east and become a low impact area.

2. Vehicle impact would be low because of self protective nature of the dominant plant species. Collection of specimens would be primary hazard.

3. Unique because of Cholla density. Opuntia biglovii -- almost pure stand. Favored for lamp making and other decorative construction.

4. Cover for small mammals and birds.

AREA

#32 NEEDLES

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo	HE 5%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 65%	L	
GR Granite Rockland	LE 30%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY H			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	H	2.
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	HO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

32 NEEDLES

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area	LO	M	
	Cactus Area	LO	M	
	Unique or Threatened Species Present			
	Unique Microhabitat			
	Other			
	WILDLIFE H *Impact in Sacramento			
	Unique/Threatened Species	H	H	Sacramento Mtns.
	Stressed Species			
	Unique Microhabitat	H	H	3.
	Wildlife Improvements	H	H	
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	?	?	
	Processing or Special Use Sites	HO	HO	4.
	Rock Art	HO	H	5.
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	HO	HO	6.
	Ceramic Scatters	H	H	
	Flake Scatters	HO	HO	
	Early Man	HO	HO	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education	L	M	
	Research Natural Area			
	Mines & Mining Resources	L	M	
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

32 NEEDLES

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land I	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	NO RATING FORM			
	Feeling of Remoteness				
	Size				
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		Needles
	Approx. Miles to Metropolitan Area	290	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	5.8 Hours/ L.A.	7.

32 NEEDLES

1. Lies west of city of Needles.
2. Sacramento Mountains locality - late Miocene vertebrates.
3. Springs - choose boundaries carefully.
4. Stone bowl/ Pestle manufacturing sites.
5. Along trails.
6. Two miles of aboriginal trail recorded with sleeping circles and trail markers.
7. High potential from local use, low potential from metropolitan areas.

AREA

#33 Whipple Mountains

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION [illegible]			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL [illegible]			
BO Barstow/Cban/Hacienda			
BR Bull Trail/Rockbroken			
CH Calvista/Hi Vista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oasis/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 80%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 15%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XC Chuckawalla/Orita/RB	ME 5%	M	
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES [illegible]			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	M?	
Rock Collecting Sites	[illegible]	H	1.
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	2.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	3.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

33 WHIPPLE MOUNTAINS

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION [L]			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE [M]			
Unique/Threatened Species			5.
Stressed Species Owls, Bats, Raptors	MO	M	
Unique Microhabitat	LO	M	
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES [L]			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES [H]			
Occupational Sites	HO	HO	6.
Processing or Special Use Sites	HS	HS	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	HS	HS	
Ceramic Scatters	H	H	
Flake Scatters	H	H	
Early Man	?	?	
RESOURCE USES (Non-Recreational) [L]			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	H	7.
RECREATION FEATURES [L]			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

33 WHIPPLE MOUNTAINS

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	M	L	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS L		
	Paved Road to Area (yes/no)	NO	Hwy. 95 within 4 miles
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked by Terrain (yes/no)	In most areas	
	Approx. Miles to Main Highway	4	
	Approx. Miles to Nearest Town	24	Parker
	Approx. Miles to Metropolitan Area	180	S. Brdno/Riverside
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	0	
	Approx. Miles of Graded Road Within Area	26	
	Approx. Miles of Trails and Non-Maintained Roads	60	
	Average Travel Time to Metropolitan Area	240	4.8 Hours

33 WHIPPLE MOUNTAINS

1. Jasper Palmwood (petrified).

2. Terrain is rough, vegetation is sparse and shrubby species dominate. Impact would be low.

3. Wildlife forage and cover.

5. Historical Bighorn sheep area - now overrun by Feral Burro in east slopes, mining on west.

6. High research potential.

7. Gold, copper, manglanese, lead - active exploration.

AREA

#34 TURTLE MOUNTAINS - INTERIOR

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION [-]			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 60%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land	LE 30%	L	
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB	ME 10%	M	
	XR Carrizo/Riverwash			
	AIR QUALITY [L]			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES [M]			
	Complete Examples of Common Geologic Features	L	M	Volcanic
	Paleontological Sites	L	M?	
	Rock Collecting Sites	L	M	Chalcedeny
	Rare Geologic Features			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS [H]			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	HO	H	2.
	Colorado Desert Wash			
	Palm Oasis	LO	M	3.
	Riparian/Aquatic	LO	H	
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

34 TURTLE MOUNTAINS-INTERIOR

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	HO	H	Spring sites
Other			
WILDLIFE H			
Unique/Threatened Species	HO	H	
Stressed Species	HO	H	
Unique Microhabitat	HO	H	
Wildlife Improvements	LO	H	4.
Stress	HO	H	5.
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes	HO		
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HO	HO	6.
Processing or Special Use Sites	H?	H	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	M	HE	
Ceramic Scatters	M	HE	
Flake Scatters	M	HE	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES H			
Primitive Values	HO	HO	
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

34 TURTLE MOUNTAINS-INTERIOR

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS				
Area Rugged with Challenging Terrain Features				
Feeling of Remoteness				
Size				
Travel Distance (Table III)				
Good Opportunity to Travel Cross-Country Without Roads or Trails				
Existence of Roads or Trails				
Specific Attractions				
Opportunity to Test Vehicle Performance				
Degree of Development				
Degree of Existing Damage				
Scenic Appeal				
Number and Degree of Restrictions				
Soil Types (Table IV)				
SUMMARY RATING	M	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS L		
Paved Road to Area (yes/no)	YES	Highway 95
Maintained Graded Road to Area (yes/no)	NO	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	5 - 6	Dirt Road
Approx. Miles to Nearest Town	13	Vidal Junction
Approx. Miles to Metropolitan Area	162/220	Riv./San Bern./ L.A.
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads	83	
Average Travel Time to Metropolitan Area	220	4.4 Hours

34 TURTLE MOUNTAINS-INTERIOR

1. No downwind population.

2. Washes in this area are vegetated and vehicular passage would be forced into washes by terrain features.

3. Palm grove is an attractive feature.

4. Desert Bighorn

5. Sheep have been known to abandon a home range because of continued disturbance.

6. Large site at Mopah Springs, plus Mohawk Spring, et al.

AREA

#35 TURTLE MOUNTAINS-PERIMETER

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo	HE 10%	M	
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	D[illegible] Daggett/Tonopah/Bitter Spring	HE 20%	L	
	GR Granite Rockland	LE 10%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land	LE 20%	L	
	MJ Mariposa/Josephine/Sites			
	N[illegible] Niland/Imperial			
	R[illegible] Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB	ME 20%	M	
	XR Carrizo/Riverwash	LE 20%	L	
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L		
	Paleontological Sites	L	L	
	Rock Collecting Sites	L	M	
	Rare Geologic Features			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush			
	Colorado Desert Creosote Bush	LO	L	2.
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash	LO	L	
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

35 TURTLE MOUNTAINS-PERIMETER

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation	LO	H	
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat			
	Other			
	WILDLIFE M			
	Unique/Threatened Species			
	Stressed Species	M	M	3.
	Unique Microhabitat			
	Wildlife Improvements			
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	?	?	
	Processing or Special Use Sites	H	HE	
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	ME	HE	
	Ceramic Scatters	ME	HE	
	Flake Scatters	ME	HE	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education			
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

35 TURTLE MOUNTAINS-PERIMETER

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS ☐				
Area Rugged with Challenging Terrain Features				
Feeling of Remoteness				
Size				
Travel Distance (Table III)				
Good Opportunity to Travel Cross-Country Without Roads or Trails				
Existence of Roads or Trails				
Specific Attractions				
Opportunity to Test Vehicle Performance				
Degree of Development				
Degree of Existing Damage				
Scenic Appeal				
Number and Degree of Restrictions				
Soil Types (Table IV)				
SUMMARY RATING	M	M	H	

ACCESS — VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS L		
Paved Road to Area (yes/no)	YES	Highway 95
Maintained Graded Road to Area (yes/no)	NO	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	5 - 6	Dirt Road
Approx. Miles to Nearest Town	13	Vidal Junction
Approx. Miles to Metropolitan Area	162/220	Riv./San Bern./L.A.
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads	83	
Average Travel Time to Metropolitan Area	220	4.4 Hours

35 TURTLE MOUNTAINS-PERIMTER

1. No downwind population.

2. (a) Plants shrubby are widely spaced. (b) Much previous disturbance by mining and military activities.

3. All species under stress from ORV.

AREA

#36 OLD WOMAN MOUNTAINS

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo	HE 10%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 10%	L	
GR Granite Rockland	LE 50%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash	LE 30%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites		H?	Pleistocene sediments
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	MO	M	1.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	MO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic	HO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

36 OLD WOMAN MOUNTAINS

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	MO	H	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present	?	H	
Unique Microhabitat	HO	H	
Other			
WILDLIFE H			
Unique/Threatened Species	HO	H	
Stressed Species	MO	M	
Unique Microhabitat	HO	H	
Wildlife Improvements	HO	H	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES M			
Mining Camps	M		2.
Mines	M		
Railroads	L		
Tramways	L		
Trails & Wagon Roads	M		
Spring & Water Holes	?		
Forts	L		
Early Highways	L		
Ghost Towns	M		
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	?	?	3.
Processing or Special Use Sites	HE	HE	
Rock Art	M?	HO	Petroglyphs
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	HE	?	
Ceramic Scatters	HE	HE	
Flake Scatters	HE	HE	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing	L		
Education			
Research Natural Area			
Mines & Mining Resources	L	M	4.
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites	LO	H	
Rock Collecting Area			
Hunting Areas	LO	H	

AREA

36 OLD WOMAN MOUNTAINS

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS H				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	3	3	3	
Size	3	3	3	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
Existence of Roads or Trails	2	2	2	
Specific Attractions	3	3	3	
Opportunity to Test Vehicle Performance	2	2	2	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	3	3	3	
Number and Degree of Restrictions	3	3	3	
Soil Types (Table IV)	2	2	2	
SUMMARY RATING	H	H	H	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS L		
Paved Road to Area (yes/no)	NO	
Maintained Graded Road to Area (yes/no)	YES	
Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
Approx. Miles to Main Highway	40	Via paved road
Approx. Miles to Nearest Town	9	Essex
Approx. Miles to Metropolitan Area	165/220	Riv./San Bern./L.A.
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	15	5.
Approx. Miles of Trails and Non-Maintained Roads	80	
Average Travel Time to Metropolitan Area	230 4.6Hrs.	6.

36 OLD WOMAN MOUNTAINS

1. Medium because: (a) Plants are relatively dense. (b) Terrain limits but does not prohibit vehicular passage. (c) Site is attractive.

2. Lots of mining camps in mountains.

3. High probability based on what is known about similar areas. Extensive rock art site recorded.

4. Au Old Woman Mining District.

5. Graded roads border area

6. Low potential impact. Forty miles secondary highway from Interstate 10.

AREA

#37 CADIZ VALLEY-DANBY LAKE

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 10%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas	LE 10%	L	
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 30%	M	
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash	LE 50%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	I.
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	Wildlife forage, cov.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
~~Digger Pine Woodland~~ Dunes	LO	L	
~~Bristlecone Pine Forest~~ Playa	LO	L	

AREA

37 CADIZ VALLEY-DANBY LAKE

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE L			
Unique/Threatened Species			
Stressed Species Small Rodents/Reptile	MO	L	
Unique Microhabitat	LO	?	2.
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES ?			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			3.
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	?	?	4.
Processing or Special Use Sites	?	M?	
Rock Art	L	L	
Intaglios	L	L	
Cemeteries/burials	?	?	
Trails	L	L	
Ceramic Scatters	M	?	
Flake Scatters	M	?	
Early Man	?	H	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	M	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

37 CADIZ VALLEY-DANBY LAKE

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features		COMBINATION OF		
	Feeling of Remoteness				
	Size	DANBY AREA AND CADIZ VALLEY			
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING	H	M	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	NO	
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
	Approx. Miles to Main Highway	50	Interstate 10
	Approx. Miles to Nearest Town	50	Desert Center
	Approx. Miles to Metropolitan Area	130/190	Riv./San Bern./L.A.
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	10	
	Approx. Miles of Graded Road Within Area	72	
	Approx. Miles of Trails and Non-Maintained Roads	30	
	Average Travel Time to Metropolitan Area	190	3.8 Hours

37 CADIZ VALLEY-DANBY LAKE

1. Low because (a) Plants widely spaced. (b) Area lacks general attractive features.

2. Generally low productive area.

3. Historic cemetary at Archer.

4. No Archaeological work done in area.

AREA

#38 DALE DISTRICT

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo	HE 10%	M	1.
AM Adelanto/Mohave/Garlock	LE 10%	M	
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring	HE 15%	L	
GR Granite Rockland	LE 55%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito	ME 10%	L	
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	M?	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	M	2.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland	LO	M	
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	3.
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

38 DALE DISTRICT

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	M	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species	LO	H	4.
Stressed Species			
Unique Microhabitat	LO	L	5.
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	H		6.
Mines	H		
Railroads	L		
Tramways	L		
Trails & Wagon Roads	H		
Spring & Water Holes	H		
Forts	L		
Early Highways	L		
Ghost Towns	H		
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	?	?	7.
Processing or Special Use Sites	M?	M	
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	M?	M?	
Flake Scatters	M?	M?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	M	Au, Dale District
RECREATION FEATURES L			
Primitive Values			
Camping Facilities	LO	M	
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas	LO	M	

AREA

38 DALE DISTRICT

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	H	M	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	YES	Highway 62
	Maintained Graded Road to Area (yes/no)	YES	
	Vehicle Access to Area Blocked by Terrain (yes/no)	NO	
	Approx. Miles to Main Highway	55 - 70	8. Interstate 10
	Approx. Miles to Nearest Town	33	29 Palms
	Approx. Miles to Metropolitan Area	117/177	San Bern/L.A.
	Approx. Miles of Main Highway Within Area	0	
	Approx. Miles of Paved Road Within Area	22	
	Approx. Miles of Graded Road Within Area	12	
	Approx. Miles of Trails and Non-Maintained Roads	100	
	Average Travel Time to Metropolitan Area	177	3.5 Hours

38 DALE DISTRICT

1. This area should be divided into two areas, high and low.

2. Low because: (a) Plants widely spaced. (b) Terrain features limit cross country travel.

3. Wildlife forage and cover.

4. Sheep in high country.

5. Potentially high.

6. Area is covered with historic mining. Old Dale District.

7. Not enough information available for area.

8. Approximately 55 miles of secondary highway from Interstate 10 to site.

AREA

#39 EAST MORONGO

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 100%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vincon/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY L			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	L	L	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

LIVING ENVIRONMENT	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION/WILDLIFE HABITATS M			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	MO	M	1.
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	LO	H	
	Pinyon Juniper Woodland	MO	H	
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic	HO	H	
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION M			
	Very Complete Example of Common Vegetation	MO	H	
	Wildflower Area	LO	M	
	Cactus Area			
	Unique or Threatened Species Present	MO	H	2.
	Unique Microhabitat	MO	H	
	Other			
	WILDLIFE H			
	Unique/Threatened Species	HO	H	
	Stressed Species	HO	H	Bighorn Sheep
	Unique Microhabitat	HO		Riparian/Aquatic
	Wildlife Improvements			
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps	?		
	Mines	?		
	Railroads	L		
	Tramways	L		
	Trails & Wagon Roads	H		
	Spring & Water Holes	?		
	Forts	L		
	Early Highways	H		
	Ghost Towns	L		
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	HO	HO	3.
	Processing or Special Use Sites	HO	HO	4.
	Rock Art	?	?	
	Intaglios			
	Cemeteries/burials	?	?	
	Trails	?	?	
	Ceramic Scatters	M	?	
	Flake Scatters	M?	H	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) M			
	Grazing	M	M	
	Education			
	Research Natural Area			
	Mines & Mining Resources	L	L	
	RECREATION FEATURES H			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas	H		

AREA

39 EAST MORONGO

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	O R V ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	6	0	9	
	Feeling of Remoteness	0	2	6	
	Size	6	0	4	
	Travel Distance (Table III)	3	6	6	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	4	0	4	
	Existence of Roads or Trails	3	9	6	
	Specific Attractions	0	9	3	
	Opportunity to Test Vehicle Performance	6	0	2	
	Degree of Development	0	4	2	
	Degree of Existing Damage	0	6	3	
	Scenic Appeal	3	3	9	
	Number and Degree of Restrictions	4	0	6	
	Soil Types (Table IV)	4	6	6	
	SUMMARY RATING	M	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area		
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	100	2 Hours

39 EAST MORONGO

1. Medium because : (a) Plant density too high for vehicular passage. (b) Slopes limit travel. (c) Scenic site attracts visitors.

2. Mammielaria alversonii, Linanthus maculatus, Astragalus deanei.

3. Upper whitewater Canyon historically occupied by the Wanaki Cauhilla.

4. Probability of late sites above trout farm.

AREA

#40 WHITEWATER

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION [H]			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
XC Sheephead/Crafton	HE 90%	L	
AX Aqua Dulce/Rough broken land	HE 10%	M	
AIR QUALITY [M]			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES [L]			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS [M]			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	MO	M	2.
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland	LO	H	
Pinyon Juniper Woodland	LO	H	
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic	HO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

40 WHITEWATER

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	MO	H	
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present	MO	H	2.
Unique Microhabitat	MO	H	
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species		M	
Unique Microhabitat		M	
Wildlife Improvements		MH	Water
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	MO	HO	3.
Processing or Special Use Sites	?	H	
Rock Art	?	?	
Intaglios			
Cemeteries/burials	?	?	
Trails	H	M?	
Ceramic Scatters	HO	H	
Flake Scatters	H	H	
Early Man	?	?	
RESOURCE USES (Non-Recreational) M			
Grazing	LO	L	
Education	MO	H	
Research Natural Area	MO	H	
Mines & Mining Resources	LO	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

40 WHITEWATER

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		Interstate 10
	Approx. Miles to Nearest Town		Whitewater
	Approx. Miles to Metropolitan Area	100	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	100	2.0 Hours

40 WHITEWATER

1. Downwind urbanization.

2. Medium because: (a) Plant density high. (b) Slopes limit travel. (c) Scenic qualities attract visitors.

3. *Linanthus alversonii*, *Astragalus deanei*.

4. Area includes site locality around springs and ponds at Morongo Regional Park.

AREA

41 Bighorn Mountains

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION H			
	AC Anthony/Cajon/Arizo	HE 15%	M	
	AM Adelanto/Mohave/Garlock	LE 10%	M	
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco	ME 40%	L	
	CL Crouch/La Posta/Glenbrook	HE 25%	H	
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AX Aqua Dulce/Rough broken land	HE 10%	M	
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	L	L	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS M			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	
	Colorado Desert Creosote Bush			
	Alkali Sink			
	Joshua Tree Woodland	MO	H	
	Pinyon Juniper Woodland	LO	M	
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic	HO	H	
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

41 Bighorn Mountains

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION [M]			
	Very Complete Example of Common Vegetation	MO	H	
	Wildflower Area	LO	M	
	Cactus Area			
	Unique or Threatened Species Present	MO	H	2.
	Unique Microhabitat			
	Other			
	WILDLIFE [H]			
	Unique/Threatened Species			
	Stressed Species	L	H	3.
	Unique Microhabitat	L	M	
	Wildlife Improvements	M	M	4.
	Stress			
	Other			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES [ ]			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES [H]			
	Occupational Sites	ME	HS	5.
	Processing or Special Use Sites	ME	HS	6.
	Rock Art	?	?	
	Intaglios	–	–	
	Cemeteries/burials	?	?	
	Trails	?	?	
	Ceramic Scatters	?	?	
	Flake Scatters	ME	HE	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) [M]			
	Grazing	MO	H	
	Education			
	Research Natural Area			
	Mines & Mining Resources	LO	L	
	RECREATION FEATURES [M]			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

41 Bighorn Mountains

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	3	3	3	
Size	3	3	3	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
Existence of Roads or Trails	3	3	3	
Specific Attractions	2	2	2	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	2	2	2	
Scenic Appeal	2	2	2	
Number and Degree of Restrictions	1	1	1	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	L	M	M	

ACCESS — VEHICLE ACCESSIBILITY		DATA	REMARKS
ACCESS FACTORS H			
Paved Road to Area	(yes/no)	Yes	
Maintained Graded Road to Area	(yes/no)		
Vehicle Access to Area Blocked by Terrain	(yes/no)		
Approx. Miles to Main Highway		Yucca Valley-	Lucerne Valley Road
Approx. Miles to Nearest Town			Yucca Valley
Approx. Miles to Metropolitan Area		130 mi.	Los Angeles
Approx. Miles of Main Highway Within Area			
Approx. Miles of Paved Road Within Area			
Approx. Miles of Graded Road Within Area			
Approx. Miles of Trails and Non-Maintained Roads			
Average Travel Time to Metropolitan Area		130 mi.	2.6 hr.

1. Downwind urbanization.

2. Erigeron parishii, Cordylanthus bernardinus, Opuntia basilaris brachyclada.

3. Potential Bighorn re-establishment.

4. Good upland game area.

5. Excellent research potential on settlement subsistence adaptation. Village sites.

6. BRM complexes, seasonal sites, etc.

AREA

42 Grapevine

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo	HE 10%	M	
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook	HE 90%	H	
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS M			
Sagebrush Scrub	MO	H	2.
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush			
Alkali Sink			
Joshua Tree Woodland	MO	H	
Pinyon Juniper Woodland	LO	H	
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

42 Grapevine

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation	MO	H	
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present	MO	H	3.
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species	M	M	4.
Unique Microhabitat	M	H	
Wildlife Improvements	M	H	
Stress	L	L	
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HO	HS	5.
Processing or Special Use Sites	HO	HS	6.
Rock Art	?	?	
Intaglios	–	–	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	H	
Flake Scatters	M	HS	
Early Man	?	?	
RESOURCE USES (Non-Recreational) M			
Grazing	MO	H	
Education	MO	H	
Research Natural Area			
Mines & Mining Resources	LO	H	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

42 Grapevine

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	3	3	3	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		Lucerne Valley
	Approx. Miles to Metropolitan Area	90	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	90 mi.	1.8 hr.

1. Downwind urbanization.

2. Medium because:

   a. 75% of vegetation in vulnerable to vehicular damage.
   b. Slopes are steep and soils are loose and erodable.

3. Opuntia basilaris brachyclada, Erigeron parishii.

4. Terrain prevents high impact.

5. Juniper flats sites being systematically vandalized - Village Sites.

6. Roasting pits, rock shelters, etc.

AREA

43 Desert Lily

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION $\boxed{M}$			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 85%	M	
XO Chuckawalla/Orita/RB	ME 15%	M	
XR Carrizo/Riverwash			
AIR QUALITY $\boxed{M}$			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES $\boxed{L}$			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	?	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

Area fenced and under protective withdrawal

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS $\boxed{L}$			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	1.
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
XXXXXXXXXXXXXXXX Wildflowers	MO	H	2.

43 Desert Lily

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION M			
	Very Complete Example of Common Vegetation	LO	H	3.
	Wildflower Area	LO	H	
	Cactus Area			
	Unique or Threatened Species Present	MO	H	4.
	Unique Microhabitat			
	Other			
	WILDLIFE L Closed area = low impact			
	Unique/Threatened Species			
	Stressed Species	L		
	Unique Microhabitat	L		
	Wildlife Improvements			
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Ports			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	H	H	
	Processing or Special Use Sites	HO	HO	
	Rock Art	–	–	
	Intaglios	–	–	
	Cemeteries/burials	H	H?	5.
	Trails	?	?	
	Ceramic Scatters	H	H	
	Flake Scatters	H	H	
	Early Man	HO	HO	6.
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education	MO	M	
	Research Natural Area			
	Mines & Mining Resources	LO	L	
	RECREATION FEATURES H			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

43 Desert Lily

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
Desert Lily fenced area				
AREA ATTRACTION FACTORS	NO RATING REQUIRED			
Area Rugged with Challenging Terrain Features				
Feeling of Remoteness				
Size				
Travel Distance (Table III)				
Good Opportunity to Travel Cross-Country Without Roads or Trails				
Existence of Roads or Trails				
Specific Attractions				
Opportunity to Test Vehicle Performance				
Degree of Development				
Degree of Existing Damage				
Scenic Appeal				
Number and Degree of Restrictions				
Soil Types (Table IV)				
SUMMARY RATING				

ACCESS — VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS M		Hwy. 10 7.5 mi. So.
Paved Road to Area (yes/no)	No	sec. hwy adj. to hwy.
Maintained Graded Road to Area (yes/no)	No	
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	7.5	Highway 10
Approx. Miles to Nearest Town	7	Desert Center
Approx. Miles to Metropolitan Area	120	San Berdo/Riv.
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	1	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads	0	
Average Travel Time to Metropolitan Area	170 mi. 3.4	hr.

1. Shrubby species are sparse and would be avoided wherever possible.

2. Herbaceous species present, no hazard to vehicles and are not avoided.

3. Soils become compacted and inhibit plant production.

4. *Hesperocallis undulata*.

5. Possibility of cormations.

6. Site around Mesquite dunes appears to be an extension of the Pinto Basin complex.

AREA

#44 PALEN DRY LAKE

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas	LE 10%	L	
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 30%	M	
XO Chuckawalla/Orita/RB	ME 30%	M	
XR Carrizo/Riverwash	LE 30%	L	
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES M			
Complete Examples of Common Geologic Features	M	M	Playa
Paleontological Sites	M?	H?	Pleistocene Fossils
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	2.
Colorado Desert Creosote Bush			
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs Duneland	LO	L	
Digger Pine Woodland			
~~Bristlecone Pine Forest~~ Playa	LO	L	

AREA

40 PALEN DRY LAKE

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species	LO	M	
Unique Microhabitat	MO	M	Washes & Dunes
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES ?	?	?	
Mining Camps	L		
Mines	L		
Railroads	L		
Tramways	L		
Trails & Wagon Roads	L		
Spring & Water Holes	L		
Forts	L		
Early Highways	L		
Ghost Towns	L		3.
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	M?	?	4.
Processing or Special Use Sites	M?	M?	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	?	
Ceramic Scatters	M?	?	
Flake Scatters	M?	M?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

44 PALEN DRY LAKE

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	2	2	2	
	Size	2	2	2	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	H	M	M	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS M			
	Paved Road to Area	(yes/no)	NO	Paved road adjacent
	Maintained Graded Road to Area	(yes/no)	NO	
	Vehicle Access to Area Blocked by Terrain	(yes/no)	NO	
	Approx. Miles to Main Highway		7.5	Highway 10
	Approx. Miles to Nearest Town		7	Desert Center
	Approx. Miles to Metropolitan Area		120/180	San Bern./Los Angeles
	Approx. Miles of Main Highway Within Area		0	
	Approx. Miles of Paved Road Within Area		1	
	Approx. Miles of Graded Road Within Area		0	
	Approx. Miles of Trails and Non-Maintained Roads		0	
	Average Travel Time to Metropolitan Area		167	3.3 Hours

44 PALEN DRY LAKE

1. Freeway and highways within range of influence.
2. Low because: (a) Plants widely spaced. (b) No general attractive feature.
3. Patton's training camp.
4. Rating assumes sand dune sites out of use-area.

AREA

#45 FORD DRY LAKE

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 10%	M	
XC Chuckawalla/Orita/RB	ME 30%	M	
XR Carrizo/Riverwash	LE 60%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	M	M	Playa
Paleontological Sites	?	?	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands	MO	M	
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

45 FORD DRY LAKE

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	H	Ironwood stand
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	H	L	
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	?	H?	
Processing or Special Use Sites	H?	HO	2.
Rock Art	H	H	3.
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	H?	
Ceramic Scatters	H	H?	
Flake Scatters	H	H?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

45 FORD DRY LAKE

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	YES	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Adjacent	Interstate 10
	Approx. Miles to Nearest Town	20	Blythe
	Approx. Miles to Metropolitan Area	185	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	185	3.7 Hours

45 FORD DRY LAKE

1. No downwind urbanization.

2. High possibility of archaeological resources associated with Iron-wood stand along east side.

3. Indirect impact to Petroglyphs to east.

AREA

46 Mc Coy Valley

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 40%	M	
XO Chuckawalla/Orita/RB	ME 30%	M	
XR Carrizo/Riverwash	LE 30%	L	
AIR QUALITY H			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	H	Pebbles
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	M	2.
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	3.
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

46 Mc Coy Valley

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation	LO	H	Ironwood Wash
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	LO	H	
Other			
WILDLIFE H	H	H	4.
Unique/Threatened Species	-	-	
Stressed Species Burro Deer	?	M	5.
Unique Microhabitat			6.
Wildlife Improvements	H	M	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines	L	L	
Railroads	L	L	
Tramways	L	L	
Trails & Wagon Roads	L	L	
Spring & Water Holes	L	L	
Forts	L	L	
Early Highways	L	L	
Ghost Towns	L	L	
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	?	?	
Processing or Special Use Sites	H	M	
Rock Art	?	?	
Intaglios	ME	M	
Cemeteries/burials	?	?	
Trails	H	H?	
Ceramic Scatters	?	?	
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	H	7.
RECREATION FEATURES M			
Primitive Values	M	LO	
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas	M	H	

AREA

46 Mc Coy Valley

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS ☐				
Area Rugged with Challenging Terrain Features	2	2	2	
Feeling of Remoteness	2	2	2	
Size	3	3	3	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
Existence of Roads or Trails	2	2	2	
Specific Attractions	1	1	1	
Opportunity to Test Vehicle Performance	2	2	2	
Degree of Development	1	1	1	
Degree of Existing Damage	2	2	2	
Scenic Appeal	2	2	2	
Number and Degree of Restrictions	3	3	3	
Soil Types (Table IV)	2	2	2	
SUMMARY RATING	M	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS L		
Paved Road to Area (yes/no)	Yes	
Maintained Graded Road to Area (yes/no)	Yes	
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	7-12	Int. 10
Approx. Miles to Nearest Town	12	Blythe
Approx. Miles to Metropolitan Area	150-210	San Bern.-L.A.
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	13	
Approx. Miles of Graded Road Within Area	10	
Approx. Miles of Trails and Non-Maintained Roads	42	
Average Travel Time to Metropolitan Area	210mi.-4.2 hr.	

46 Mc Coy Valley

1. Downwind urbanization.
2. Low because:

   a. Plants widely spaced.
   b. Lacks general attractive features.

3. Wildlife forage and cover.
4. Due to RV competition.
5. Close to agricultural lands.
6. Best ironwood wash complex in desert, excellent dove nesting area.
7. Gypsum, limestone, copper, manganese.

AREA

47 Little Chuckwalla Mountains

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION [M]			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Cban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sopobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas	ME 10%	M	
	XC Chuckawalla/Orita/RB	ME 30%	M	
	XR Carrizo/Riverwash	LE 60%	L	
	AIR QUALITY [L]			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES [L]			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	?	?	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS [L]			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	2.
	Colorado Desert Creosote Bush	LO	L	
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H	3.
	Colorado Desert Wash	LO	H	
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

47 Little Chuckwalla Mountains

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species	MO	H	4.
Stressed Species	MO	H	
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	M	?	
Processing or Special Use Sites	HE	M?	5.
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	M?	6.
Ceramic Scatters	?	?	
Flake Scatters	HE	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) M			
Grazing			
Education	MO	M	
Research Natural Area			
Mines & Mining Resources	L	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities	M		
Resource Interpretation Sites	M		
Rock Collecting Area	M		
Hunting Areas			

AREA

47 Little Chuckwalla Mountains

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	2	2	2	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	2	2	2	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	L	H	M	

See 45 and 46: Mecca Hills

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Int. 10	Adjacent
	Approx. Miles to Nearest Town	20	Blythe
	Approx. Miles to Metropolitan Area	185	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	185 mi.	3.7 hr.

47 Little Chuckwalla Mountains

1. No downwind urbanization.

2. Low Because:

   a. Plants are generally widely spaced.
   b. Terrain features restrict cross country travel.

3. Wildlife forage and cover.

4. Bighorn transient range.

5. Rock shelters reported.

6. Trails from Colorado River.

AREA

48 Big Chuckwalla Countains

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 50%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 5%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB	ME 20%	M	
XR Carrizo/Riverwash	LE 25%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	M?	2.
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	3.
Colorado Desert Creosote Bush	LO	L	
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	4.
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

48 Big Chuckwalla Mountains

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area	LO	M	
	Cactus Area			
	Unique or Threatened Species Present	LO	H	5.
	Unique Microhabitat			
	Other			
	Not easily accessible			
	WILDLIFE M			
	Unique/Threatened Species	HO	H	6.
	Stressed Species	HO	H	
	Unique Microhabitat			
	Wildlife Improvements			
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	?	?	
	Processing or Special Use Sites	H	H	
	Rock Art	M	H	7.
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	H	H	
	Ceramic Scatters	H	?	
	Flake Scatters	?	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) M			
	Grazing			
	Education	M	H	
	Research Natural Area			
	Mines & Mining Resources	L	L	
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities		H	
	Resource Interpretation Sites			
	Rock Collecting Area		H	
	Hunting Areas		H	

AREA

48 Big Chuckwalla Countains

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	2	2	2	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	M	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Int. 10	Adjacent
	Approx. Miles to Nearest Town		Desert Center
	Approx. Miles to Metropolitan Area	175	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	175 mi.	3.5 hr.

1. No downwind urbanization.

2. Plio-pleistocene sediments.

3. Low because:

   a. Plants are generally widely spaced.
   b. Terrain restricts cross country travel.

4. Wildlife forage and cover.

5. Mammillaria alversonii, Salvia greatae.

6. Bighorn and Chuckwalla Lizard.

7. Corn Spring petroglyphs.

AREA

49 Chiriaco Summit

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 30%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB	ME 5%	M	
XR Carrizo/Riverwash	LE 65%	L	
AIR QUALITY H			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			1.
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	2.
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

49 Chiriaco Summit

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION I			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES L			
Occupational Sites	L	L	3.
Processing or Special Use Sites	H	L	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	L	
Ceramic Scatters	?	?	
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

49 Chiriaco Summit

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS [X]				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	3	3	3	
Size	3	3	3	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
Existence of Roads or Trails	1	1	1	
Specific Attractions	2	2	2	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	2	2	2	
Number and Degree of Restrictions	2	2	2	
Soil Types (Table IV)	2	2	2	
SUMMARY RATING	M	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS [H]		
Paved Road to Area (yes/no)	Yes	
Maintained Graded Road to Area (yes/no)		
Vehicle Access to Area Blocked by Terrain (yes/no)		
Approx. Miles to Main Highway	Int. 10	Adjacent
Approx. Miles to Nearest Town		Chiriaco Summit
Approx. Miles to Metropolitan Area	160	Los Angeles
Approx. Miles of Main Highway Within Area		
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	160 mi.	3.2 hr.

49 Chiriaco Summit

1. Freeway and airport within range of influence.

2. Shrubby species are sparse and will be avoided when possible. Terrain limits cross country travel only slightly.

3. Present impact reported to be high in areas also exposed to extensive washing.

AREA

50 Orocopia Foothills

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION [L]			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland	HE 10%		1.
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 80%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial	LE 10%		
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY [H]			
In Urban Pollution Influenced Air Shed	H		2.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES [L]			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	?	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS [L]			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	3.
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	4.
Palm Oasis			
Riparian/Aquatic	MO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

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50 Orocopia Foothills

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present	LO	H	Salvia greatae
	Unique Microhabitat			
	Other			
	WILDLIFE H			
	Unique/Threatened Species	HO	H	Bighorn
	Stressed Species			
	Unique Microhabitat	HO	H	Riparian & Ciff.
	Wildlife Improvements	L-H	H	Tenaja
	Stress	Canyon	Spring	Spring Development
	Other			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES L			
	Mining Camps	L	L	
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads Bradshaw Trail - Now obliterated by RV use			
	Spring & Water Holes along Bradshaw Trail			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H ?			
	Occupational Sites	H	H?	5.
	Processing or Special Use Sites	H	H?	
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	HE	HE	Big Maria - SG Trail
	Ceramic Scatters	H	?	
	Flake Scatters	H	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			6.
	Education			
	Research Natural Area			
	Mines & Mining Resources	L	H	
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

50 Orocopia Foothills

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	L	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	Highway 60-70
	Maintained Graded Road to Area (yes/no)	No	
	Vehicle Access to Area Blocked by Terrain (yes/no)	Yes	7.
	Approx. Miles to Main Highway	3	
	Approx. Miles to Nearest Town	4	Chiriaco Summit
	Approx. Miles to Metropolitan Area	100-150	S.B., Riv - L.A.
	Approx. Miles of Main Highway Within Area	0	Borders area
	Approx. Miles of Paved Road Within Area	0	
	Approx. Miles of Graded Road Within Area	0	
	Approx. Miles of Trails and Non-Maintained Roads	33	8.
	Average Travel Time to Metropolitan Area	150 mi.	3 hrs.

50 Orocopia Foothills

1. Large percent of low impact area.

2. Adding to an already polluted air shed.

3. Shrubby species are sparse and may be avoided when possible. Terrain limits cross country travel.

4. Wildlife forage and cover.

5. Aboriginal Trail from Coachella Valley to Colorado River along southern foothills.

6. Talc and decorative stone.

7. Except in north and south part of range.

8. Mostly at base of north area and trail traversing eastern part.

AREA

51 Orocopia Mountains

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 100%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY H			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	M	H	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	2.
Colorado Desert Creosote Bush	LO	L	
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic	LO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

51 Orocopia Mountains

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present	LO	H	Salvia Greatae
	Unique Microhabitat			
	Other			
	WILDLIFE H			
	Unique/Threatened Species	LO	H	
	Stressed Species Bighorn Sheep	HO	H	
	Unique Microhabitat	LO	H	
	Wildlife Improvements	LO	H	
	Stress	LO	H	
	Other			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES M ?			
	Occupational Sites	?	M?	3.
	Processing or Special Use Sites	?	?	
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	H	?	4.
	Ceramic Scatters	?	?	
	Flake Scatters	?	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) H			
	Grazing			
	Education	H	H	5.
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

51 Orocopia Mountains

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)		
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	6	
	Approx. Miles to Nearest Town		
	Approx. Miles to Metropolitan Area	150 mi	Los Angeles
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	150 mi.	3 hrs.

1. In urban influenced air shed.

2. a. Plants shrubby and widely spaced.
   b. Terrain is extremely limiting to cross country travel.

3. Little archeological work done in area.

4. Aboriginal trails throughout area.

5. Place where astronauts trained - excellent area for geological interpretations.

AREA

52 Mecca Foothills

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION H			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland	HE 80%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR DuneLand			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash	LE 20%	L	
	AIR QUALITY H			
	In Urban Pollution Influenced Air Shed	H		1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	LO	L	
	Paleontological Sites	MO	H	
	Rock Collecting Sites	LO	H	
	Rare Geologic Features	LO	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush	LO	L	2.
	Colorado Desert Creosote Bush	LO	L	
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash	LO	H	
	Colorado Desert Wash	LO	H	
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

52 Mecca Foothills

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT (continued)	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area	LO	M	
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat			
	Other			
	WILDLIFE L			
	Unique/Threatened Species			
	Stressed Species Bighorn	LO	H	
	Unique Microhabitat	LO	L	3.
	Wildlife Improvements			
	Stress			
	Other			

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HUMAN INTEREST VALUES	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES M			
	Occupational Sites	H	?	4.
	Processing or Special Use Sites	H	?	
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	H	?	
	Ceramic Scatters	H	?	
	Flake Scatters	H	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education	LO	M	
	Research Natural Area			
	Mines & Mining Resources	LO	H	5.
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

52 Mecca Foothills

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS $\boxed{M}$				
Area Rugged with Challenging Terrain Features	2	2	2	
Feeling of Remoteness	2	2	2	
Size	2	2	2	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
Existence of Roads or Trails	1	1	1	
Specific Attractions	1	1	1	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	3	3	3	
Number and Degree of Restrictions	2	2	2	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	$\boxed{M}$	$\boxed{M}$	$\boxed{M}$	

ACCESS — VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS $\boxed{H}$		
Paved Road to Area (yes/no)	Yes	
Maintained Graded Road to Area (yes/no)	Yes	
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	Adjacent to Int. 10	
Approx. Miles to Nearest Town	6	To Indio
Approx. Miles to Metropolitan Area	140	Los Angeles
Approx. Miles of Main Highway Within Area		
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	140 mi.	2.8 hrs.

1. Urban influenced air shed.

2. a. Plants shrubby and widely spaced.
   b. Terrain features restrict cross country travel.

3. Springs at high value for Bighorn.

4. Rated M because of present impact.

5. U, Au, Cu, Ba, Mo, Perlite

AREA

53 Mecca Hills Interior

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION H			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland	HE 100%	L	
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY H			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	H	
Rock Collecting Sites			
Rare Geologic Features			

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush	LO	L	2.
Colorado Desert Creosote Bush	LO	L	
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash	LO	H	
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

53 Mecca Hills Interior

LIVING ENVIRONMENT (continued) RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE L			
Unique/Threatened Species	L	M	
Stressed Species	L	M	
Unique Microhabitat			3.
Wildlife Improvements			
Stress	L	M	
Other			

HUMAN INTEREST VALUES RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	?	?	4.
Processing or Special Use Sites	H	?	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	M?	
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education	LO	H	
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

53 Mecca Hills Interior

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	2	2	2	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	M	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS H			
	Paved Road to Area	(yes/no)	No	
	Maintained Graded Road to Area	(yes/no)	No	
	Vehicle Access to Area Blocked by Terrain	(yes/no)		
	Approx. Miles to Main Highway		3	
	Approx. Miles to Nearest Town			Mecca
	Approx. Miles to Metropolitan Area		140	Los Angeles
	Approx. Miles of Main Highway Within Area			
	Approx. Miles of Paved Road Within Area			
	Approx. Miles of Graded Road Within Area			
	Approx. Miles of Trails and Non-Maintained Roads			
	Average Travel Time to Metropolitan Area		140 mi.	2.8 hrs.

1. Urban influenced air shed.

2. a. Plants shrubby and widely spaced.
   b. Terrain extremely limiting to vehicular passage.

3. Not prime habitat except at Oases.

4. Rated M because of present impact.

AREA

54 Salt Creek

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION $\boxed{L}$			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial	LE 100%	L	
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY $\boxed{H}$			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES $\boxed{L}$			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS $\boxed{H}$			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	2.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic	HO	H	3.
Live Oak Woodland			
Desert Slope Chapparal			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

54 Salt Creek

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION H			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat	HO	H	4.
	Other			
	WILDLIFE H			
	Unique/Threatened Species	M	H	Insects - Fish
	Stressed Species	All	L	
	Unique Microhabitat	HO	H	
	Wildlife Improvements			
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES M			
	Occupational Sites	H		5.
	Processing or Special Use Sites	H	M?	
	Rock Art	–	–	
	Intaglios	–	–	
	Cemeteries/burials	L	L	
	Trails	?	?	6.
	Ceramic Scatters	H	M	
	Flake Scatters	?	?	
	Early Man	–	–	
	RESOURCE USES (Non-Recreational) H			
	Grazing			
	Education			
	Research Natural Area	H	H	
	Mines & Mining Resources	L	L	
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

54 Salt Creek

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE: Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	L	L	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway		Adjacent
	Approx. Miles to Nearest Town	9	
	Approx. Miles to Metropolitan Area	150	
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads	6	
	Average Travel Time to Metropolitan Area	150 mi.	3 hr.

1. Downwind urbanization.
2. Vegetation outside the creekbank area and seep areas is sparse and not subject to heavy damage.
3. Denser vegetation will suffer heavier damage.
4. Unique because of water in a typically dry area.
5. Numerous Cahuilla rancherias around area.
6. Salt Creek major route to Colorado River.

AREA

55 Santa Rosa Mountains

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland	HE 10%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 80%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash	LE 10%	L	
	AIR QUALITY H			
	In Urban Pollution Influenced Air Shed	H		1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	L	L?	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush			
	Colorado Desert Creosote Bush	LO	L	2.
	Alkali Sink			
	Joshua Tree Woodland	LO	H	
	Pinyon Juniper Woodland	LO	H	
	Mojave Desert Wash			
	Colorado Desert Wash			
	Palm Oasis	LO	H	
	Riparian/Aquatic	LO	H	
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

55 Santa Rosa Mountains

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present	LO	H	9 species
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	H	H	
Stressed Species	H	H	
Unique Microhabitat	L	H	3.
Wildlife Improvements	L	H	
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HO	HO	
Processing or Special Use Sites	HO	HO	
Rock Art	H	H	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	HO	HO	
Ceramic Scatters	HO	HO	
Flake Scatters	H	H	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	HO	H	
Research Natural Area	HO	H	
Mines & Mining Resources	L	L	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

55 Santa Rosa Mountains

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	M	M	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS H			
	Paved Road to Area	(yes/no)	Yes	
	Maintained Graded Road to Area	(yes/no)		
	Vehicle Access to Area Blocked by Terrain	(yes/no)	Yes	
	Approx. Miles to Main Highway			Hwy. 74 through area
	Approx. Miles to Nearest Town			
	Approx. Miles to Metropolitan Area		10	Palm Springs & Indio
	Approx. Miles of Main Highway Within Area			
	Approx. Miles of Paved Road Within Area			
	Approx. Miles of Graded Road Within Area			
	Approx. Miles of Trails and Non-Maintained Roads			
	Average Travel Time to Metropolitan Area		130 mi.	2.6 hrs.

1. Downwind urbanization.

2. Low because:

    a. Terrain limits travel
    b. Plants widely spaced, shrubby to treelike, often armed.

3. Mostly localized, not mountain wide. All species, when subject to ORV use, express stress to some degree.

AREA

56 San Felipe/Superstition Hills

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland	LE 20%	L	
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville	HE 10%	M	
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland	ME 50%	L	
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash	LE 20%	L	
AIR QUALITY M			
In Urban Pollution Influenced Air Shed	MO		1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	L	L	Fault scarp
Paleontological Sites	L	H?	2.
Rock Collecting Sites		H	Calcite
Rare Geologic Features	H	H	3.

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS I			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	4.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic	HO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs Duneland	LO	L	
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

56 San Felipe/Superstition Hills

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION [L]			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present	~~L~~	~~H~~	5.
Unique Microhabitat			
Other			
WILDLIFE [L]			
Unique/Threatened Species	H	H	6.
Stressed Species	H	L	
Unique Microhabitat	–		
Wildlife Improvements			
Stress	~~H~~	~~L~~	
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES [ ]			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES [H]			
Occupational Sites	H	H	
Processing or Special Use Sites	H	HO	7.
Rock Art	L?	M?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	H	
Ceramic Scatters	HO	HO	
Flake Scatters	H	H	
Early Man	?	?	
RESOURCE USES (Non-Recreational) [L]			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES [M]			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

56 San Felipe/Superstition Hills

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	See San Felipe Hills and			
	Feeling of Remoteness				
	Size	Superstition Hills			
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING	H	H	H	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS M			
	Paved Road to Area	(yes/no)	Yes	
	Maintained Graded Road to Area	(yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain	(yes/no)	No	
	Approx. Miles to Main Highway		Hwy. 86 Adjacent	
	Approx. Miles to Nearest Town			
	Approx. Miles to Metropolitan Area		180	100 mi. San Diego
	Approx. Miles of Main Highway Within Area		45	
	Approx. Miles of Paved Road Within Area		10	
	Approx. Miles of Graded Road Within Area			
	Approx. Miles of Trails and Non-Maintained Roads		118	
	Average Travel Time to Metropolitan Area		180 mi.	3.6 hrs.

1. Highway and urbanization downwind.

2. Fossil beds on USGS map.

3. Ancient bench terrace.

4. Plants mostly shrubby and widely spaced.

5. *Ditaxis adenophora*, *Cryptantha ganderi*, *Astragalus magdalenae*.

6. High impact on low value resource.

7. Possibility of fish traps.

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland	ME 100%	L	
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed	MO		
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	1.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	2.
Palm Oasis			
Riparian/Aquatic	HO	H	3.
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

57 San Sebastian Marsh

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	HO		4.
Other			
WILDLIFE L High value Low impact			
Unique/Threatened Species	L	H	Desert Pupfish
Stressed Species	L	H	
Unique Microhabitat	L	H	
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES ?			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads – May have been camp site along early trail			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HE	H	5.
Processing or Special Use Sites	H	H	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	?	
Ceramic Scatters	H	H	
Flake Scatters	H	H?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	H	H	
Research Natural Area	H	H	
Mines & Mining Resources	L	L	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

57 San Sebastian Marsh

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
AREA ATTRACTION FACTORS X				
Area Rugged with Challenging Terrain Features	1	1	1	
Feeling of Remoteness	2	2	2	
Size	1	1	1	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
Existence of Roads or Trails	2	2	2	
Specific Attractions	1	1	1	
Opportunity to Test Vehicle Performance	2	2	2	
Degree of Development	1	1	1	
Degree of Existing Damage	1	3	3	
Scenic Appeal	1	1	1	
Number and Degree of Restrictions	1	1	1	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	M	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS M		
Paved Road to Area (yes/no)	No	
Maintained Graded Road to Area (yes/no)	No	Dirt Road
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	4.5	
Approx. Miles to Nearest Town	15.9	
Approx. Miles to Metropolitan Area	180-100	L.A. - San Diego
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads	5.5	Jeep Trails
Average Travel Time to Metropolitan Area	180 mi.	3.6 hrs.

57 San Sebastion Marsh

1. Vegetation outside the creek bed is sparse and not subject to heavy damage.

2. Riparian vegetation is attractive and vulnerable.

3. Wildlife forage and cover.

4. Unique because of the abundance of water in a typically dry area.

5. Area of Kamia Rancheria located on U.S. Government Survey Maps of 1855 - National Register nomination.

AREA

58 Navy Lease

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland	LE 10%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR DuneLand			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB	ME 10%	M	
	XR Carrizo/Riverwash	LE 80%	L	
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	?	?	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush			
	Colorado Desert Creosote Bush	LO	L	2.
	Alkali Sink	LO	L	
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash	LO	H	
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

58 Navy Lease

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area	LO	H	
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat			
	Other			
	WILDLIFE L			
	Unique/Threatened Species	H	L	3.
	Stressed Species	H	L	
	Unique Microhabitat	–	–	
	Wildlife Improvements	–	–	
	Stress	H	L	
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads	L		
	Tramways	L		
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns	L		
	ARCHAEOLOGICAL RESOURCES M			
	Occupational Sites	?	M ?	4.
	Processing or Special Use Sites			
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	?	M?	
	Ceramic Scatters	?	M	
	Flake Scatters	?	M	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education			
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

58 Navy Lease

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	2	2	2	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	H	H	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	No	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town	25	El Centro
	Approx. Miles to Metropolitan Area	185-100	L.A. _ San Diego
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	(185mi/3.7hr)-L.A.	(100mi-2hr)-San Diego

58 Navy Lease

1. Highway and urbanization downwind.
2. Low because plants are widely spaced.
3. Impact high on a relatively low value resource.
4. IVC has been doing some archeological survey in area.

AREA

59 Coyote Mountain

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION M			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland	HE 30%	L	
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland			
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland	LE 40%	L	
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash	LE 30%	L	
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			1.
	Stationary Air Pollution Sources Nearby			
	Other			
	GEOLOGICAL RESOURCES H			
	Complete Examples of Common Geologic Features	L	?	
	Paleontological Sites	H	H	2.
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	?	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS L			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush			
	Colorado Desert Creosote Bush	LO	L	3.
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash	LO	H	
	Palm Oasis			
	Riparian/Aquatic	MO	H	
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands			
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

59 Coyote Mountain

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present	LO	H	5 species
	Unique Microhabitat			
	Other			
	WILDLIFE L Not easily accessible by veh. in critical areas			
	Unique/Threatened Species	L	M	Transient Bighorn Rg.
	Stressed Species	?		
	Unique Microhabitat			
	Wildlife Improvements			
	Stress	?		Stress unk. factor
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES H ?			
	Occupational Sites	?	?	
	Processing or Special Use Sites	H	HS	Reinman et. al. 1959
	Rock Art	?	?	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	H	HE	
	Ceramic Scatters	H	HE	
	Flake Scatters	H	HE	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) H			
	Grazing			
	Education	HO	H	
	Research Natural Area			
	Mines & Mining Resources	L	?	
	RECREATION FEATURES M			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

59 Coyote Mountain

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	O R V O R I E N T A T I O N T Y P E			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS ☐				
Area Rugged with Challenging Terrain Features	Accumulation of painted gorge			
Feeling of Remoteness				
Size	and fossil canyon			
Travel Distance (Table III)				
Good Opportunity to Travel Cross-Country Without Roads or Trails				
Existence of Roads or Trails				
Specific Attractions				
Opportunity to Test Vehicle Performance				
Degree of Development				
Degree of Existing Damage				
Scenic Appeal				
Number and Degree of Restrictions				
Soil Types (Table IV)				
SUMMARY RATING	M	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS H		
Paved Road to Area (yes/no)	Yes	
Maintained Graded Road to Area (yes/no)		
Vehicle Access to Area Blocked by Terrain (yes/no)		
Approx. Miles to Main Highway		S2 - Adjacent
Approx. Miles to Nearest Town		Ocotillo
Approx. Miles to Metropolitan Area	200 90	L.A. - San Diego
Approx. Miles of Main Highway Within Area		
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	(200 mi-4hr)-LA	(90mi-1.8hr)-San Diego

59 Coyote Mountain

1. Highway and urbanization downwind.
2. Marine fossil beds.
3. Vegetation is generally shrubby and widely spaced.

AREA

60 Plaster City

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland	HE 30%	L	
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB	ME 30%	M	
XR Carrizo/Riverwash	LE 40%	L	
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby	MO		
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	?	2.
Rock Collecting Sites			
Rare Geologic Features			

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	3.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	4.
Palm Oasis			
Riparian/Aquatic	HO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

60 Plaster City

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area	LO	H	
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat			
	Other			
	WILDLIFE L			
	Unique/Threatened Species			
	Stressed Species			
	Unique Microhabitat			
	Wildlife Improvements			
	Stress			
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES L			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES M ?			
	Occupational Sites	?	?	
	Processing or Special Use Sites	H	M?	
	Rock Art	?	L	
	Intaglios	?	?	
	Cemeteries/burials	?	?	
	Trails	H	M	
	Ceramic Scatters	H	M	
	Flake Scatters	H	M?	
	Early Man	H	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education			
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

60 Plaster City

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	1	1	1	
	Feeling of Remoteness	2	2	2	
	Size	3	3	3	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	1	1	1	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	1	1	1	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	L	H	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Hwy. 80	Adjacent
	Approx. Miles to Nearest Town		Plaster City
	Approx. Miles to Metropolitan Area	200-90	L.A.-San Diego
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	(200mi-4hr)-LA. (90mi-1.8hr)-San Diego	

1. Highway and urbanization downwind.
2. Possible oyster beds.
3. Low because plants widely spaced.
4. Wildlife forage and cover.

AREA

61 Yuha Basin

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland	HE 20%	L	
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland	ME 20%	M	
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 20%	M	
XO Chuckawalla/Orita/RB	ME 25%	M	
XR Carrizo/Riverwash	LE 15%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features	L	L	1.
Paleontological Sites	H	H	Oyster beds
Rock Collecting Sites	L	M	
Rare Geologic Features	H	H	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	2.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	3.
Palm Oasis			
Riparian/Aquatic	HO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

61 Yuha Basin

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE M			
Unique/Threatened Species			
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps	H	H	
Mines			
Railroads			
Tramways			
Trails & Wagon Roads Overland/Butterfield Trail/DeAnza Trail			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	?	?	
Processing or Special Use Sites	?	?	
Rock Art	?	?	
Intaglios	HS	HS	4.
Cemeteries/burials	H	H	
Trails	H	H	
Ceramic Scatters	H	H	
Flake Scatters	H	H	
Early Man	H	H	5.
RESOURCE USES (Non-Recreational) M			
Grazing			
Education	MO	H	
Research Natural Area			
Mines & Mining Resources	L	L	
RECREATION FEATURES M			
Primitive Values			
Camping Facilities	M		
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

61 Yuha Basin

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	2	2	2	
	Feeling of Remoteness	3	3	3	
	Size	2	2	2	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	3	3	3	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	2	2	2	
	Degree of Development	1	1	1	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	1	1	1	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	3	3	3	
	SUMMARY RATING	M	H	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)	No	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		Plaster City-El Centro
	Approx. Miles to Metropolitan Area		
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads	22	
	Average Travel Time to Metropolitan Area	(200mi-4hr)-L	A.(100mi-2hr)-San Diego

1. Petrified wood, desert pavement.
2. Low because plants are widely spaced.
3. Wildlife forage and cover.
4. Yuha intaglios - National Register nomination.
5. Yuha man found in area.

AREA

62 Davies Valley

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 70%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB	ME 20%	M	
XR Carrizo/Riverwash	LE 10%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L?	
Rock Collecting Sites	L	H	
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland	LO	L	
Mojave Desert Wash			
Colorado Desert Wash	HO	H	1.
Palm Oasis	HO	H	
Riparian/Aquatic	HO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			

AREA

62 Davies Valley

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION H			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present	MO	Palms	6 species
Unique Microhabitat	HO		2.
Other			
WILDLIFE H			
Unique/Threatened Species	M	H	3.
Stressed Species	M	Bighorn	
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other Species	H	H	Bats, Raptors, etc.

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES ?	?	?	
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HS	H	4.
Processing or Special Use Sites	HS	HO	Dense Agave Stands
Rock Art	HS	H	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	?	
Ceramic Scatters	H	?	
Flake Scatters	HO	HO	
Early Man	HS	HO	5.
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	M	H	
Research Natural Area	H	H	
Mines & Mining Resources	L	M	Tungsten
RECREATION FEATURES M			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas	MO	H	

AREA

62 Davies Valley

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	2	2	2	
	Opportunity to Test Vehicle Performance	1	1	1	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	M	M	M	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)	No	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		Plaster City-El Centro
	Approx. Miles to Metropolitan Area		
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	(200mi-4hr)-L.A.	(100mi-2hr)-San Diego

1. Much of the wash area is heavily vegetated and vulnerable to vehicular damage because of adjoining steep slopes.

2. Unique because of the presence of water for plant production in a "dry" area.

3. Disturbance would be most extreme in the best habitat center.

4. "Village" site in Pinto Canyon.

5. Early lithic sites with cairns.

AREA

63 Crucifixion Thorn

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION N			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB	ME 90%	M	
XR Carrizo/Riverwash	LE 10%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	?	
Rock Collecting Sites			
Rare Geologic Features			

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush			
Alkali Sink	LO	H	I.
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			

AREA

63 Crucifixion Thorn

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION $\boxed{L}$			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present	LO	H	2.
Unique Microhabitat			
Other			
WILDLIFE $\boxed{L}$			
Unique/Threatened Species	L	M	
Stressed Species	L	M	
Unique Microhabitat	L	M	
Wildlife Improvements			
Stress	?	?	
Other			

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES $\boxed{L}$			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Ports			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES $\boxed{L}$			
Occupational Sites	?	L	
Processing or Special Use Sites	?	L?	
Rock Art			
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	?	L?	
Flake Scatters	?	L?	
Early Man	?	L?	
RESOURCE USES (Non-Recreational) $\boxed{L}$			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES $\boxed{H}$			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

63 Crucifixion Thorn

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	Area Fenced				
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features				
	Feeling of Remoteness				
	Size				
	Travel Distance (Table III)				
	Good Opportunity to Travel Cross-Country Without Roads or Trails				
	Existence of Roads or Trails				
	Specific Attractions				
	Opportunity to Test Vehicle Performance				
	Degree of Development				
	Degree of Existing Damage				
	Scenic Appeal				
	Number and Degree of Restrictions				
	Soil Types (Table IV)				
	SUMMARY RATING				

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS H		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway		
	Approx. Miles to Nearest Town		Plaster City-El Centro
	Approx. Miles to Metropolitan Area		
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	(200mi-4hr)-LA,	(100mi-2hr)-San Diego

63 Crucifixion Thorn

1. Stature of dominant plant species is self protecting against vehicle damage. Burning would be primary hazard.

2. Crucifixion Thorn has limited distribution.

AREA

64 Pinto Wash

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 40%	M	
XO Chuckawalla/Orita/RB	ME 35%	M	
XR Carrizo/Riverwash	LE 25%	L	
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	?	M?	
Rock Collecting Sites			
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	1.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	2.
Palm Oasis			
Riparian/Aquatic	LO	H	
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			

AREA

64 Pinto Wash

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	H	
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE L			
Unique/Threatened Species			
Stressed Species			
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M ?			
Occupational Sites	?	M?	
Processing or Special Use Sites	?	M?	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	H	M?	
Ceramic Scatters	H	M?	
Flake Scatters	H	M?	
Early Man	H	M?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES M			
Primitive Values			
Camping Facilities	M		
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

64 Pinto Wash

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS ☐				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	3	3	3	
Size	1	1	1	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
Existence of Roads or Trails	1	1	1	
Specific Attractions	2	2	2	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	3	3	3	
Number and Degree of Restrictions	2	2	2	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	L	M	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS H		
Paved Road to Area (yes/no)	Yes	
Maintained Graded Road to Area (yes/no)		
Vehicle Access to Area Blocked by Terrain (yes/no)		
Approx. Miles to Main Highway		
Approx. Miles to Nearest Town		Calexico -El Centro
Approx. Miles to Metropolitan Area		
Approx. Miles of Main Highway Within Area		
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	(210mi-4.2hr)-LA	(110mi-2.2hr)- San Dieg

1. Low because plants widely spaced.

2. Wildlife forage and cover.

AREA

65 Mammoth Wash

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR DuneLand	LE 100%	L	
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites			
Rock Collecting Sites	L	L	Pebbles
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	1.
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	2.
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			

AREA

65 Mammoth Wash

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area			
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	?		3.
Stressed Species	H	H	
Unique Microhabitat	H	H	
Wildlife Improvements			
Stress	H		
Other			Burro, Mule Deer

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L ?			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES ?			
Occupational Sites	?	?	4.
Processing or Special Use Sites	?	?	
Rock Art	?	?	
Intaglios	?	?	
Cemeteries/burials	?	?	
Trails	?	?	
Ceramic Scatters	H	?	
Flake Scatters	H	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	M	Au, Cu
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

65 Mammoth Wash

ORV ACTIVITY — OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	O R V O R I E N T A T I O N T Y P E			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS ☐				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	1	1	1	
Size	1	1	1	
Travel Distance (Table III)	3	3	3	
Good Opportunity to Travel Cross-Country Without Roads or Trails	1	1	1	
Existence of Roads or Trails	1	1	1	
Specific Attractions	2	2	2	
Opportunity to Test Vehicle Performance	1	1	1	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	2	2	2	
Number and Degree of Restrictions	2	2	2	
Soil Types (Table IV)	2	2	2	
SUMMARY RATING	L	M	M	

ACCESS — VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS M		
Paved Road to Area (yes/no)	No	
Maintained Graded Road to Area (yes/no)	Yes	
Vehicle Access to Area Blocked by Terrain (yes/no)	No	
Approx. Miles to Main Highway	15	Highway S 78
Approx. Miles to Nearest Town		Glamis
Approx. Miles to Metropolitan Area		
Approx. Miles of Main Highway Within Area		
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	(250mi-5hr)-LA, (160mi-3.2hr)-SanDiego	

1. Low because plants are widely spaced and shrubby.

2. Wildlife forage and cover.

3. Potential occurrence of Spadefoot Toad, Fringe Toed Lizard and Kit Fox.

4. No time to adequately evaluate since addition at last minute.

AREA

66 Glamis/Imperial Sand Dunes (North)

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland	LE 65%	L	
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland	ME 15%	L	
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 20%	M	
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			1.
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	
Rare Geologic Features	L	H	Dunes

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	2.
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands Dune grass	HO	?	3.
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			

AREA

66 Glamis/Imperial Sand Dunes (North)

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation			
Wildflower Area	MO	H	4.
Cactus Area			
Unique or Threatened Species Present	MO	H	5.
Unique Microhabitat	?	?	
Other			
WILDLIFE H			
Unique/Threatened Species	MO	H	6.
Stressed Species	MO	H	
Unique Microhabitat Seep areas & east side of dunes	HO	H	
Wildlife Improvements			
Stress	Low in closed areas. Medium to		
Other	high in corridor and open areas.		

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads			
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	HS	H	7.
Processing or Special Use Sites	H	H	
Rock Art	LS	L	
Intaglios	LO	L	
Cemeteries/burials	ME	M	
Trails		L	
Ceramic Scatters	HS	H	8.
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	HO	H	
Research Natural Area	HO	H	
Mines & Mining Resources	L	L	
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

66 Glamis/Imperial Sand Dunes (North)

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	2	2	2	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	H	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	Yes	
	Maintained Graded Road to Area (yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain (yes/no)	No	
	Approx. Miles to Main Highway	Hwy. S78	Adjacent
	Approx. Miles to Nearest Town		Glamis
	Approx. Miles to Metropolitan Area	250-160	L.A.-San Diego
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area		LA-5hr, San Diego 3.2

1. Railroad is east of dune area.
2. Shrubby spp. are sparse and would be avoided if possible.
3. Herbaceous spp. present, no hazard to vehicles and therefore are not avoided.
4. Herbaceous spp. present, no hazard to vehicles and therefore are not avoided.
5. Astragalus magdalenae.
6. Number of unique dune dwelling reptiles, all spp would be stressed where vehicles allowed.
7. May be only area along SE side of ancient Lake LeConte, high size density.
8. High density along ancient shoreline of Lake LeConte.

AREA

67 East Mesa

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			1.
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland	ME 50%	L	
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas	ME 50%	M	
XO Chuckawalla/Orita/RB			
XR Carrizo/Riverwash			
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	L	Gold samples
Rare Geologic Features	L	L	

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	H	2.
Alkali Sink	LO	L	
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

67 East Mesa

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION L			
Very Complete Example of Common Vegetation			
Wildflower Area	LO	M	
Cactus Area			
Unique or Threatened Species Present	LO	H	3.
Unique Microhabitat	?	M	4.
Other			
WILDLIFE M			
Unique/Threatened Species	MO	H	
Stressed Species	MO	M	
Unique Microhabitat	HO	H	5.
Wildlife Improvements			
Stress	?	?	6.
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES L			
Mining Camps	H		7.
Mines	H		
Railroads	L		
Tramways	L		
Trails & Wagon Roads	H		
Spring & Water Holes	L		8.
Forts	L		
Early Highways	L		
Ghost Towns	H		
ARCHAEOLOGICAL RESOURCES H			
Occupational Sites	H	HS	9.
Processing or Special Use Sites	H	H	
Rock Art	–	–	
Intaglios	–	–	
Cemeteries/burials	?	?	
Trails	H	?	
Ceramic Scatters			10.
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education			
Research Natural Area			
Mines & Mining Resources	L	H	11.
RECREATION FEATURES L			
Primitive Values			
Camping Facilities	L		
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

67 East Mesa

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	O R V O R I E N T A T I O N T Y P E			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	2	2	
	Degree of Existing Damage	2	2	2	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	L	L	L	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS M			
	Paved Road to Area	(yes/no)	Yes	Int. 8
	Maintained Graded Road to Area	(yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain	(yes/no)		
	Approx. Miles to Main Highway		Int. 8	Adjacent
	Approx. Miles to Nearest Town		10	Holtville
	Approx. Miles to Metropolitan Area		250-140	L.A.-San Diego
	Approx. Miles of Main Highway Within Area			
	Approx. Miles of Paved Road Within Area			
	Approx. Miles of Graded Road Within Area			
	Approx. Miles of Trails and Non-Maintained Roads			
	Average Travel Time to Metropolitan Area		L.A.-5hr.	San Diego-2.8 hr.

1. This was a test site for the study of California Desert soils subjected to RV use.

2. Low because plants widely spaced - dune formation and holding.

3. Eriogonum deserticola.

4. Uniqueness of dune habitat.

5. Seep areas along canal with riparion vegetation should be restricted.

6. Stress degree unknown.

7. Mining area in Chargo Muchacho Mountains.

8. Interest in desert.

9. NPS in BLM geothermal E.I.S. mentioned at least two sites of National Register quality.

10. Extensive pottery scatters along ancient shoreline of Lake LeConte.

11. Geothermal; Au, sand-gravel.

AREA

68 Glamis/Imperial Sand Dunes (South)

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION L			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland			
BO Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Hivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland	LE 75%	L	
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland			
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land			
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland	ME 10%	L	
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Sobobe/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XO Chuckawalla/Orita/RB	ME 10%	M	
XR Carrizo/Riverwash	LE 5%	L	
AIR QUALITY M			
In Urban Pollution Influenced Air Shed			
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES L			
Complete Examples of Common Geologic Features	L	L	
Paleontological Sites	L	L	
Rock Collecting Sites	L	M	Gold samples
Rare Geologic Features	L	H	Dunes

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS H			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash			
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands Dune grass	HO	?	
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

68 Glamis/Imperial Sand Dunes (South)

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION M			
	Very Complete Example of Common Vegetation			
	Wildflower Area	MO	H	
	Cactus Area			
	Unique or Threatened Species Present	MO	H	1.
	Unique Microhabitat	LO	H	
	Other			
	WILDLIFE H			
	Unique/Threatened Species	H	H	
	Stressed Species	H	M	
	Unique Microhabitat	H	M	2.
	Wildlife Improvements			
	Stress	H	M	
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES			
	Mining Camps			
	Mines			
	Railroads			
	Tramways			
	Trails & Wagon Roads			
	Spring & Water Holes			
	Forts			
	Early Highways			
	Ghost Towns			
	ARCHAEOLOGICAL RESOURCES L			
	Occupational Sites	?	?	3.
	Processing or Special Use Sites	L	L	
	Rock Art			
	Intaglios			
	Cemeteries/burials	?	?	
	Trails	?	?	
	Ceramic Scatters	L	?	
	Flake Scatters	?	?	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education	HO	L	4.
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

68 Glamis/Imperial Sand Dunes (South)

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE Vehicle 1	Activity 1	Land 1	REMARKS
	AREA ATTRACTION FACTORS				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	3	3	3	
	Size	3	3	3	
	Travel Distance (Table III)	1	1	1	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	2	2	2	
	Specific Attractions	1	1	1	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	2	2	2	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	3	3	3	
	Soil Types (Table IV)	1	1	1	
	SUMMARY RATING	M	M	H	

ACCESS	VEHICLE ACCESSIBILITY		DATA	REMARKS
	ACCESS FACTORS M			
	Paved Road to Area	(yes/no)	Yes	
	Maintained Graded Road to Area	(yes/no)	Yes	
	Vehicle Access to Area Blocked by Terrain	(yes/no)	No	
	Approx. Miles to Main Highway		Hwy. S78	Adjacent
	Approx. Miles to Nearest Town			Glamis
	Approx. Miles to Metropolitan Area		250-160mi.	L.A.-SanDiego
	Approx. Miles of Main Highway Within Area			
	Approx. Miles of Paved Road Within Area			
	Approx. Miles of Graded Road Within Area			
	Approx. Miles of Trails and Non-Maintained Roads			
	Average Travel Time to Metropolitan Area		LA-5 hr.	San Diego-3.2 hr.

1. Astragalus magdalenae.
2. Eventually may result in extirpation of dune - dwelling animals in this area.
3. If archy material is in area, it would only appear in blow-outs.
4. Low in value to education and research because of previous recreation and military use.

AREA

69 Plank Road

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR Duneland	LE 100%	L	
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			
	Other			1.
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	L	L	
	Paleontological Sites	L	L	
	Rock Collecting Sites	L	L	
	Rare Geologic Features	L	L	

LIVING ENVIRONMENT	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION/WILDLIFE HABITATS H			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush			
	Colorado Desert Creosote Bush	LO	L	2.
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparral			
	White Fir Forest			
	Desert Grasslands	HO	?	3.
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

AREA

69 Plank Road

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation			
Wildflower Area	MO	M	4.
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat			
Other			
WILDLIFE H			
Unique/Threatened Species	HO		5.
Stressed Species	HO		
Unique Microhabitat			
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES H			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads	HO	H	
Spring & Water Holes Gray's Well	LO	H	
Forts			
Early Highways	HO	H	
Ghost Towns			
ARCHAEOLOGICAL RESOURCES ?			
Occupational Sites			6.
Processing or Special Use Sites	?	?	
Rock Art			
Intaglios			
Cemeteries/burials			
Trails			
Ceramic Scatters	?	?	
Flake Scatters			
Early Man			
RESOURCE USES (Non-Recreational) H			
Grazing			
Education	HO	M	
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES H			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

69 Plank Road

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	2	2	2	
Size	1	1	1	
Travel Distance (Table III)	2	2	2	
Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
Existence of Roads or Trails	1	1	1	
Specific Attractions	3	3	3	
Opportunity to Test Vehicle Performance	3	3	3	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	3	3	3	
Number and Degree of Restrictions	2	2	2	
Soil Types (Table IV)	2	2	2	
SUMMARY RATING	M	H	M	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS M		
Paved Road to Area (yes/no)	~~Yes~~	~~Int. 8~~
Maintained Graded Road to Area (yes/no)		
Vehicle Access to Area Blocked by Terrain (yes/no)		
Approx. Miles to Main Highway	Int. 8	Adjacent
Approx. Miles to Nearest Town	15	Yuma, Arizona
Approx. Miles to Metropolitan Area	250-160mi.	L.A.-San Diego
Approx. Miles of Main Highway Within Area		
Approx. Miles of Paved Road Within Area		
Approx. Miles of Graded Road Within Area		
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	LA-5hr.	San Diego-3.2 hr.

69 Plank Road

1. Freeway within area of influence.
2. Shrubby species are sparse and would be avoided if possible.
3. Not avoided by vehicle.
4. Vehicle use over concentrated. Inhibits ephemeral plant production.
5. Fringe Toed Lizard - also burrowing mammals in dune area; Kit Fox.
6. No archeology done in area - probability low.

AREA

70 Buttercup Valley

SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
NON-LIVING ENVIRONMENT	SOIL ASSOCIATION L			
	AC Anthony/Cajon/Arizo			
	AM Adelanto/Mohave/Garlock			
	BL Badland			
	BO Barstow/Oban/Hacienda			
	BR Bull Trail/Roughbroken			
	CH Calvista/Hivista/Cinco			
	CL Crouch/La Posta/Glenbrook			
	CO Calpine/Oakglen/Mottsville			
	DR DuneLand	LE 100%	L	
	DT Daggett/Tonopah/Bitter Spring			
	GR Granite Rockland			
	IH Imperial/Holtville			
	IT Indio/Thermal			
	LR Lava Rock Land			
	MJ Mariposa/Josephine/Sites			
	NI Niland/Imperial			
	RL Rosamond/Land/Playas			
	RM Rositas/Mecca/Meloland			
	SI Supan/Iron Mountain			
	TP Thermal - Playas			
	TS Tujunga/Sobobe/Riverwash			
	VB Vinton/Brazito			
	XA Aco/Acolita/Rositas			
	XO Chuckawalla/Orita/RB			
	XR Carrizo/Riverwash			
	AIR QUALITY M			
	In Urban Pollution Influenced Air Shed			
	Stationary Air Pollution Sources Nearby			1.
	Other			
	GEOLOGICAL RESOURCES L			
	Complete Examples of Common Geologic Features	LO	L	
	Paleontological Sites	?	?	
	Rock Collecting Sites			
	Rare Geologic Features	LO	L	

	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
LIVING ENVIRONMENT	VEGETATION/WILDLIFE HABITATS H			
	Sagebrush Scrub			
	Shadscale Scrub			
	Mojave Desert Creosote Bush			
	Colorado Desert Creosote Bush	LO	L	2.
	Alkali Sink			
	Joshua Tree Woodland			
	Pinyon Juniper Woodland			
	Mojave Desert Wash			
	Colorado Desert Wash			
	Palm Oasis			
	Riparian/Aquatic			
	Live Oak Woodland			
	Desert Slope Chapparal			
	White Fir Forest			
	Desert Grasslands Dune grass	HO	? *	3.
	Rocks, Lava Flows & Cliffs			
	Digger Pine Woodland			
	Bristlecone Pine Forest			

* Dune holding and forming

AREA

70 Buttercup Valley

LIVING ENVIRONMENT (continued)

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION M			
Very Complete Example of Common Vegetation			
Wildflower Area	MO	M	4.
Cactus Area			
Unique or Threatened Species Present			
Unique Microhabitat	?	?	
Other			
WILDLIFE H			
Unique/Threatened Species	MO	H	5.
Stressed Species	MO	H	
Unique Microhabitat	HO	H	
Wildlife Improvements			
Stress			
Other			

HUMAN INTEREST VALUES

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
HISTORICAL RESOURCES M			
Mining Camps			
Mines			
Railroads			
Tramways			
Trails & Wagon Roads	MO	H	
Spring & Water Holes			
Forts			
Early Highways			
Ghost Towns			
ARCHAEOLOGICAL RESOURCES M			
Occupational Sites	?	?	
Processing or Special Use Sites	?	?	
Rock Art	L	L	
Intaglios	L	L	
Cemeteries/burials	L	L	
Trails	L	L	
Ceramic Scatters	H	M?	6.
Flake Scatters	?	?	
Early Man	?	?	
RESOURCE USES (Non-Recreational) L			
Grazing			
Education	HO	L	7.
Research Natural Area			
Mines & Mining Resources			
RECREATION FEATURES L			
Primitive Values			
Camping Facilities			
Resource Interpretation Sites			
Rock Collecting Area			
Hunting Areas			

AREA

70 Buttercup Valley

ORV ACTIVITY	OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
		Vehicle 1	Activity 1	Land 1	
	AREA ATTRACTION FACTORS ☐				
	Area Rugged with Challenging Terrain Features	3	3	3	
	Feeling of Remoteness	2	2	2	
	Size	1	1	1	
	Travel Distance (Table III)	2	2	2	
	Good Opportunity to Travel Cross-Country Without Roads or Trails	3	3	3	
	Existence of Roads or Trails	1	1	1	
	Specific Attractions	3	3	3	
	Opportunity to Test Vehicle Performance	3	3	3	
	Degree of Development	1	1	1	
	Degree of Existing Damage	3	3	3	
	Scenic Appeal	3	3	3	
	Number and Degree of Restrictions	2	2	2	
	Soil Types (Table IV)	2	2	2	
	SUMMARY RATING	H	H	H	

ACCESS	VEHICLE ACCESSIBILITY	DATA	REMARKS
	ACCESS FACTORS M		
	Paved Road to Area (yes/no)	Yes	Int. 8
	Maintained Graded Road to Area (yes/no)		
	Vehicle Access to Area Blocked by Terrain (yes/no)		
	Approx. Miles to Main Highway	Int. 8	Adjacent
	Approx. Miles to Nearest Town	10 [illegible]	Yuma, Arizona
	Approx. Miles to Metropolitan Area	260-165 [illegible]	L.A.-San Diego
	Approx. Miles of Main Highway Within Area		
	Approx. Miles of Paved Road Within Area		
	Approx. Miles of Graded Road Within Area		
	Approx. Miles of Trails and Non-Maintained Roads		
	Average Travel Time to Metropolitan Area	L.A.-5.2 hr.	San Diego-3.3 hr.

1. Sand and dust over freeway.

2. Shrubby species are sparse and may be avoided if possible.

3. Herbaceous species present, no hazard to vehicles and therefore are not avoided.

4. Herbaceous species present, no hazard to vehicles and therefore are not avoided. Vehicle use over concentrated areas inhibits ephemeral plant production. Unquantified impacts are certainly experienced.

5. Fringe Toed Lizard, et. al, sand dwelling spp. impacted.

6. Sites recorded along border.

7. Low because of previous recreation and military disturbance.

AREA

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SPECIALIZED CHECKLIST OF POTENTIAL RV ENVIRONMENTAL EFFECTS

NON-LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
SOIL ASSOCIATION M			
AC Anthony/Cajon/Arizo			
AM Adelanto/Mohave/Garlock			
BL Badland	HE 15%	L	
BC Barstow/Oban/Hacienda			
BR Bull Trail/Roughbroken			
CH Calvista/Rivista/Cinco			
CL Crouch/La Posta/Glenbrook			
CO Calpine/Oakglen/Mottsville			
DR Duneland			
DT Daggett/Tonopah/Bitter Spring			
GR Granite Rockland	LE 30%	L	
IH Imperial/Holtville			
IT Indio/Thermal			
LR Lava Rock Land	LE 25%	L	
MJ Mariposa/Josephine/Sites			
NI Niland/Imperial			
RL Rosamond/Land/Playas			
RM Rositas/Mecca/Meloland			
SI Supan/Iron Mountain			
TP Thermal - Playas			
TS Tujunga/Soboba/Riverwash			
VB Vinton/Brazito			
XA Aco/Acolita/Rositas			
XC Chuckawalla/Orita/RB	ME 30%	M	
XF Carrizo/Riverwash			
AIR QUALITY L			
In Urban Pollution Influenced Air Shed			1.
Stationary Air Pollution Sources Nearby			
Other			
GEOLOGICAL RESOURCES H			
Complete Examples of Common Geologic Features			
Paleontological Sites	?	H	2.
Rock Collecting Sites			
Rare Geologic Features			

LIVING ENVIRONMENT

RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
VEGETATION/WILDLIFE HABITATS L			
Sagebrush Scrub			
Shadscale Scrub			
Mojave Desert Creosote Bush			
Colorado Desert Creosote Bush	LO	L	3.
Alkali Sink			
Joshua Tree Woodland			
Pinyon Juniper Woodland			
Mojave Desert Wash			
Colorado Desert Wash	LO	H	
Palm Oasis			
Riparian/Aquatic			
Live Oak Woodland			
Desert Slope Chapparral			
White Fir Forest			
Desert Grasslands			
Rocks, Lava Flows & Cliffs			
Digger Pine Woodland			
Bristlecone Pine Forest			

AREA

71 Picacho

LIVING ENVIRONMENT (continued)	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	VEGETATION L			
	Very Complete Example of Common Vegetation			
	Wildflower Area			
	Cactus Area			
	Unique or Threatened Species Present			
	Unique Microhabitat	LO	H	
	Other			
	WILDLIFE M			
	Unique/Threatened Species	M	H	
	Stressed Species	H	H	
	Unique Microhabitat	M	M	4.
	Wildlife Improvements			
	Stress	M	?	
	Other			

HUMAN INTEREST VALUES	RESOURCE FACTOR	POTENTIAL RV EFFECT	RELATIVE RESOURCE VALUE	REMARKS
	HISTORICAL RESOURCES H			
	Mining Camps	H	H	
	Mines	?	?	
	Railroads			
	Tramways	?	?	
	Trails & Wagon Roads	?	?	
	Spring & Water Holes	?	?	
	Forts			
	Early Highways			
	Ghost Towns	H	H	
	ARCHAEOLOGICAL RESOURCES H			
	Occupational Sites	?	H	5.
	Processing or Special Use Sites	?	H	
	Rock Art	?	H	
	Intaglios	?	H	6.
	Cemeteries/burials	?	?	
	Trails	?	H	
	Ceramic Scatters	?	H	
	Flake Scatters	?	H	
	Early Man	?	?	
	RESOURCE USES (Non-Recreational) L			
	Grazing			
	Education	LO	H	
	Research Natural Area			
	Mines & Mining Resources			
	RECREATION FEATURES L			
	Primitive Values			
	Camping Facilities			
	Resource Interpretation Sites			
	Rock Collecting Area			
	Hunting Areas			

AREA

71 Picacho

ORV ACTIVITY

OFF ROAD VEHICLE TERRAIN PREFERENCE FEATURES	ORV ORIENTATION TYPE			REMARKS
	Vehicle 1	Activity 1	Land 1	
AREA ATTRACTION FACTORS ☐				
Area Rugged with Challenging Terrain Features	3	3	3	
Feeling of Remoteness	3	3	3	
Size	3	3	3	
Travel Distance (Table III)	1	1	1	
Good Opportunity to Travel Cross-Country Without Roads or Trails	2	2	2	
Existence of Roads or Trails	3	3	3	
Specific Attractions	3	3	3	
Opportunity to Test Vehicle Performance	2	2	2	
Degree of Development	1	1	1	
Degree of Existing Damage	3	3	3	
Scenic Appeal	2	2	2	
Number and Degree of Restrictions	3	3	3	
Soil Types (Table IV)	1	1	1	
SUMMARY RATING	M	H	H	

ACCESS

VEHICLE ACCESSIBILITY	DATA	REMARKS
ACCESS FACTORS I		
Paved Road to Area (yes/no)	NO	
Maintained Graded Road to Area (yes/no)	Yes	
Vehicle Access to Area Blocked by Terrain (yes/no)	No	Maybe cars, terrain steep in some places
Approx. Miles to Main Highway	15	
Approx. Miles to Nearest Town	10	Bard
Approx. Miles to Metropolitan Area	280-185	L.A. - San Diego
Approx. Miles of Main Highway Within Area	0	
Approx. Miles of Paved Road Within Area	0	
Approx. Miles of Graded Road Within Area	0	
Approx. Miles of Trails and Non-Maintained Roads		
Average Travel Time to Metropolitan Area	LA-5.6 hr.	San Diego-3.7 hr.

71 Picacho

1. No downwind urbanization.

2. Upper miocene vertibrate deposits. Plio-pleistocene segments.

3. Plants shrubby and widely spaced, damage unlikely.

4. Yuma Mountain Lion, et. al. Raptor nesting area, two important springs.

5. Extremely high research potential, area should be placed on National Register.

6. Rock alignments and gravel figurines.

III. ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

The goal of this section is to identify the relative impacts of alternative RV use designations on identified program areas. That recreation vehicles damage or alter resources is obvious. Only the degree of alteration is in question. Simple observation reveals that plants and animals are killed, that soil is displaced, and that the air is polluted immediately following a recreation vehicle event. The magnitude of specific resource quality and specific vehicle impact on that quality is of concern here.

A. VALIDITY AND CONSISTENCY OF THE PROCEDURE.

Whether one resource is more important than any other in determining the ultimate use of the land was subjectively analyzed. Summary ratings for soil association, air quality, vegetation/wildlife habitats, etc. were recorded for each candidate use area. These were then discussed in a staff seminar. Final impact ratings depended on one or a combination of several resource qualities and potential impacts and represents the combined judgments following a systematic evaluation process.

B. KEY RESOURCE ANALYSIS.

The summary rating of potential environmental effects and RV preference quality were transferred from the specialized Environmental Analysis Checklist to a single matrix for easy review and comparison. (Figure 29). This matrix highlights under "remarks" the resources considered key determinants of each planned use category.

C. EVALUATION OF ALTERNATIVES.

The alternates to the entire plan are: (a) "open" to encourage the present unregulated use of RV's in the desert, (b) to restrict vehicle use to roads and trails, or (c) to close the entire desert to ORV use.

To "open" the entire desert to RV use would be to encourage the present unregulated management of RV's. It is widely accepted that a continuation of the current unrestricted use of RV's in the desert would result in much environmental damage as well as in many sociological conflicts between user groups. Few groups would advocate entirely opening the desert. Most are willing to compromise as long as their interests are met in one portion of the desert or another. Also, the resources vary in their resistance to RV impacts. It appears more logical to manage the desert on ecological boundaries. These might be plant communities, north slope vs. south slope of a range of mountains, or habitat surrounding an oasis. It is on these individual areas that we can generalize

AREA NUMBER AND NAME	NON-LIVING ENVIRONMENT			LIVING ENVIRONMENT			HUMAN INTEREST VALUES				O.R.V. PREFERENCE			VEHICLE USE DESIGNATION	PRIME VALUES
	AIR QUALITY	SOILS	GEOLOGY	VEGETATION & WILDLIFE HABITAT	VEGETATION	WILDLIFE	ARCHAEOLOGY	HISTORICAL	OTHER USES, RECREATION	OTHER USES, RESOURCES	VEHICLE ORIENTED	ACTIVITY ORIENTED	LAND ORIENTED		
1. EUREKA DUNES	L	M	M	M	H	H	H	H	L	H	H	M	M	Special Design	Veg., Other Res. Us & Vehicle Rec.
2. NORTH SALINE VALLEY	L	M	M?	H	H	H	H	?	H	L	L	H	M	Closed	Veg., Wildlife & Oth Rec. (Primitive Val
3. SALINE-PANAMINT	L	M	M	H	H	H	H	H	L	L	L	H	M	Designated Roads & Trails	Veg., Wildlife, & Arch.
4. OLANCHA	L	M	M	L	L	L	M?	?	M	L	M	M	M	Open & Competition	Vehicle Rec.
5. DARWIN FALLS	L	L	L	H	H	H	?	L	H	L	L	L	L	Closed	Veg., Wildlife & Other Rec. Use
6. WALKER PASS/ EL PASO	L	M	H	H	H	H	H	H	H	H	H	H	H	Designated Roads & Trails	Veg., Wildlife & Other Rec. Use
7. LONE TREE CANYON	L	H	L	L	M	M	H	L	M	L	M	M	M	Designated Roads & Trails	Soils, Arch., Wildlife & Veg.
8. DOVE SPRINGS	L	M	H?	H	H	H	M	L	H	H	H	H	H	Open	Vehicle Rec. & Other Rec. Use
9. JAWBONE CANYON	L	H	H	H	M	M	?	M	M	H	H	H	H	Special Design	Land Status & Vehicle Rec.
10. TORTOISE PRESERVE	L	M	L	M	M	H	M?	L	H	H	M	M	M	Closed	Wildlife & Other Res. Uses
11. RAND MOUNTAINS SPANGLER HILLS	L	M	L	M	L	M	M	L	L	L	H	H	H	Open & Competition	Vehicle Rec.
12. RANDSBURG/ JOHANNESBURG	H	L	L	L	L	M	M	M	L	L	L	L	L	Designated Roads & Trails	Residential Area

AREA NUMBER AND NAME	NON-LIVING ENVIRONMENT			LIVING ENVIRONMENT			HUMAN INTEREST VALUES				O.R.V. PREFERENCE			VEHICLE USE DESIGNATION	PRIME VALUES
	AIR QUALITY	SOILS	GEOLOGY	VEGETATION & WILDLIFE HABITAT	VEGETATION	WILDLIFE	ARCHAEOLOGY	HISTORICAL	OTHER USES, RECREATION	OTHER USES, RESOURCES	VEHICLE ORIENTED	ACTIVITY ORIENTED	LAND ORIENTED		
13. TRONA PINNACLES	L	H	H	L	L	L	M?	L	M	L	M	M	M	Designated Roads & Trails	Soils, Geology & Other Rec. Use
14. RED MOUNTAIN/ CUDDEBACK	L	M	L	L	L	H	M	?	L	L	H	M	H	Ex. Roads & Trails-Compet.	Wildlife, Veh. Rec. & Other Rec. Use
15. FREMONT PEAK	L	M	L	L	L	H	H	?	L	L	H	M	M	Ex. Roads & Trails-Compet.	Land Status & Vehicle Rec.
16. CALICO/COYOTE LAKE	M	M	H	L	L	H	H	H	H	M	H	H	H	Designated Roads & Trails	Wildlife, Arch. & Other Rec. Uses
17. AMARGOSA CANYON	L	H	M	H	H	H	H	H	H	M	M	M	M	Closed	Soils, Veg., Wildlife, Arch. & Other Res. Use
18. DUMONT DUNES N. W.	L	L	L	L	L	M	?	L	M	M	H	L	H	Open	Vehicle Rec.
19. DUMONT DUNES	L	H	H?	L	L	M	M	H	M	M	H	M	H	Special Design	Other Rec. Use Other Res. Use
20. KINGSTON MOUNTAINS	L	L	H?	M	L	M	H	?	L	H	L	H	H	Designated Roads & Trails	Arch., Wildlife & Other Res. Use
21. IVANPAH VALLEY	M	M	L	L	L	M	H	L	L	L	M	L	H	Special Design	Arch. & Vehicle Use
22. CLARK MOUNTAIN	M	L	L	M	L	M	M	L	M	L	M	L	L	Closed	Wildlife, Arch., & Primative Values
23. EASTERN MOJAVE	L	M	H	H	H	H	H	H	M	H	H	H	M	Designated Roads & Trails	Veg., Wildlife, Other Rec. & Res. Use
24. KELSO DUNES	L	L	L	L	M	H	H?	L	M	H	H	M	M	Closed	Other Res. Uses

KEY RESOURCE ELEMENTS - (SUMMARY RATINGS)

AREA NUMBER AND NAME	NON-LIVING ENVIRONMENT			LIVING ENVIRONMENT			HUMAN INTEREST VALUES				O.R.V. PREFERENCE			VEHICLE USE DESIGNATION	PRIME VALUES
	AIR QUALITY	SOILS	GEOLOGY	VEGETATION & WILDLIFE HABITAT	VEGETATION	WILDLIFE	ARCHAEOLOGY	HISTORICAL	OTHER USES, RECREATION	OTHER USES, RESOURCES	VEHICLE ORIENTED	ACTIVITY ORIENTED	LAND ORIENTED		
37. CADIZ VALLEY/ DANBY LAKE	L	L	L	L	L	L	M?	?	L	L	H	M	H	Open Compet.	Vehicle Rec.
38. DALE DISTRICT	L	L	L	L	L	M	M?	H	L	L	M	M	M	Special Design	Historical, Wildlife & Vehicle Rec.
39. EAST MORONGO	L	L	L	M	M	H	H	L	H	M	M	M	M	Designated Roads & Trails	Wildlife, Arch. & Other Rec. Use
40. WHITEWATER	M	H	L	M	M	M	H	L	M	M	M	M	M	Designated Roads & Trails	Wildlife, Veg., Soil & Vehicle Rec.
41. BIGHORN	M	H	L	M	M	H	H	L	M	M	M	M	H	Designated Roads & Trails	Soils, Arch. & Wildlife
42. GRAPEVINE	M	H	L	M	M	M	H	L	L	M	M	M	H	Designated Roads & Trails	Soils, Arch., Veg. & Wildlife
43. DESERT LILY	M	M	L	L	H	L	H	L	H	L	L	L	L	Closed	Veg. & Other Rec. Use
44. PALEN DRY LAKE	M	M	M	L	L	M	M?	?	L	L	H	M	M	Special Design Compet.	Vehicle Rec.
45. FORD DRY LAKE	L	M	L	L	L	H	H	?	L	L	H	M	H	Open Compet.	Vehicle Rec.
46. MC COY VALLEY	H	M	L	L	L	H	M	L	M	L	H	M	M	Open	Vehicle Rec.
47. LITTLE CHUCKWALLA MOUNTAINS	L	M	L	L	L	M	M?	L	M	M	M	H	M	Open Compet.	Vehicle Rec.
48. BIG CHUCKWALLA MOUNTAINS	L	L	L	L	L	M	H	L	L	M	H	H	H	Designated Roads & Trails	Arch., Wildlife & Other Rec. Use

KEY RESOURCE ELEMENTS (SUMMARY RATINGS)

AREA NUMBER AND NAME	NON-LIVING ENVIRONMENT			LIVING ENVIRONMENT			HUMAN INTEREST VALUES				O.R.V. PREFERENCE			VEHICLE USE DESIGNATION	PRIME VALUES
	AIR QUALITY	SOILS	GEOLOGY	VEGETATION & WILDLIFE HABITAT	VEGETATION	WILDLIFE	ARCHAEOLOGY	HISTORICAL	OTHER USES, RECREATION	OTHER USES, RESOURCES	VEHICLE ORIENTED	ACTIVITY ORIENTED	LAND ORIENTED		
49. CHIRIACO SUMMIT	H	L	L	L	L	M	L	L	L	L	M	L	L	Open	Vehicle Rec.
50. OROCOPIA FOOTHILLS	H	L	L	L	L	H	H?	L	L	L	M	M	M	Designated Roads & Trails	Wildlife, Arch. & Vehicle Rec.
51. OROCOPIA MOUNTAINS	H	L	H?	L	L	H	M?	L	L	H	M	M	M	Closed	Wildlife & Other Res. Use
52. MECCA FOOTHILLS	H	H	L	L	L	L	M	L	L	L	L	M	M	Special Design	Soils, Arch., Land Status & Veh. Rec.
53. MECCA HILLS INTERIOR	H	H	H	L	L	L	M	L	L	L	L	M	M	Closed	Soils & Geology
54. SALT CREEK	H	L	L	H	H	H	M	L	L	H	L	L	L	Closed	Veg., Wildlife & Other Res. Use
55. SANTA ROSA MOUNTAINS	H	L	L	L	L	H	H	L	L	H	M	M	M	Designated Roads & Trails	Wildlife, Arch. & Other Res. Use
56. SAN FELIPE/ SUPERSTITION HILLS	M	M	H	L	L	L	H	?	M	L	M	H	H	Special Design Compet.	Arch., Land Status & Vehicle Rec.
57. SAN SEBASTIAN MARSH	M	M	L	H	H	L	H	?	L	H	M	M	L	Closed	Veg. & Other Res. Use
58. NAVY LEASE	M	L	L	L	L	L	M	L	L	L	H	H	M	Special Compet.	Land Status & Vehicle Rec.
59. COYOTE MOUNTAIN	M	M	H	L	L	L	H?	?	M	H	L	M	M	Designated Roads & Trails	Geology & Other Res. Use
60. PLASTER CITY	M	M	L	L	L	L	M?	L	L	L	H	H	M	Open	Vehicle Rec.

KEY RESOURCE ELEMENTS - (SUMMARY RATINGS)

AREA NUMBER AND NAME	NON-LIVING ENVIRONMENT			LIVING ENVIRONMENT			HUMAN INTEREST VALUES				O.R.V. PREFERENCE			VEHICLE USE DESIGNATION	PRIME VALUES
	AIR QUALITY	SOILS	GEOLOGY	VEGETATION & WILDLIFE HABITAT	VEGETATION	WILDLIFE	ARCHAEOLOGY	HISTORICAL	OTHER USES, RECREATION	OTHER USES, RESOURCES	VEHICLE ORIENTED	ACTIVITY ORIENTED	LAND ORIENTED		
61. YUHA BASIN	L	M	H	L	L	M	H	H	M	M	H	H	M	Designated Roads & Trails	Geology, Arch.
62. DAVIES VALLEY	L	L	L	H	H	H	H	?	M	H	M	M	M	Special Design	Veg., Wildlife Arch.
63. CRUCIFIXION THORN	L	M	L	L	L	L	L	L	H	L	L	L	L	Closed	Other Rec. Use & Soils
64. PINTO WASH	L	M	L	L	L	L	M?	L	M	L	M	M	M	Special Design Competition	Vehicle Rec.
65. MAMMOTH WASH	M	L	L	L	L	H	?	?	L	L	M	M	M	Open	Vehicle Rec.
66. GLAMIS/IMPERIAL SAND DUNES	M	L	L	H	M	H	H	L	L	H	H	H	H	Closed	Veg., Wildlife & Other Res. Use
67. EAST MESA	M	M	L	L	L	H	H	L	L	L	M	M	M	Special Design Competition	Arch. & Vehicle Rec.
68. GLAMIS/IMPERIAL SAND DUNES	M	L	L	H	M	H	L	L	L	L	M	H	H	Open Competition	Vehicle Rec.
69. PLANK ROAD	M	L	L	H	M	H	?	H	H	H	H	H	H	Special Design	Historical & Other Rec. Use
70. BUTTERCUP VALLEY	M	L	L	H	M	H	M	M	L	L	H	H	H	Open	Vehicle Rec.
71. PICACHO	L	M	H	L	L	M	H	H	L	L	H	H	H	Designated Roads & Trails	Arch., Wildlife & Multiagency Mgmt.

KEY RESOURCE ELEMENTS - (SUMMARY RATINGS)

AREA NUMBER AND NAME	NON-LIVING ENVIRONMENT			LIVING ENVIRONMENT			HUMAN INTEREST VALUES				O.R.V. PREFERENCE			VEHICLE USE DESIGNATION	PRIME VALUES
	AIR QUALITY	SOILS	GEOLOGY	VEGETATION & WILDLIFE HABITAT	VEGETATION	WILDLIFE	ARCHAEOLOGY	HISTORICAL	OTHER USES, RECREATION	OTHER USES, RESOURCES	VEHICLE ORIENTED	ACTIVITY ORIENTED	LAND ORIENTED		
25. MOJAVE BASIN	L	M	L	L	L	H	H	H	L	L	H	M	M	Special Design Compet.	Wildlife, Arch. & Vehicle Rec.
26. EL MIRAGE LAKE	L	L	L	L	L	L	L	L	H	L	H	L	L	Special Design	Land Status & Rec. Conflicts
27. SHADOW MOUNTAINS	M	M	L	H	M	H	M?	L	M	L	H	M	M	Special Design Compet.	Land Status & Vehicle Rec.
28. KRAMER HILLS/ IRON MOUNTAIN	L	L	L	L	L	H	L	L	L	L	H	M	M	Special Design Compet.	Wildlife, Land Status & Vehicle Rec.
29. STODDARD VALLEY	L	M	L	M	M	M	L	L	M	L	H	M	M	Special Design Compet.	Veg., Wildlife, Land Status & Veh. Rec.
30. UPPER JOHNSON VALLEY	L	M	L	M	L	M	L	L	L	L	M	M	M	Open Compet.	Vehicle Rec.
31. BIGELOW CHOLLA	M	M	L	L	L	L	L	L	L	L	L	M	L	Closed	Unique Habitat
32. NEEDLES	H	H	L	M	L	H	H	L	L	L	M	M	H	Special Design Compet.	Wildlife, Arch. & Vehicle Rec.
33. WHIPPLE MOUNTAINS	L	L	L	L	L	M	H	L	L	L	M	L	L	Closed	Arch., Veg. Primitive Values
34. TURTLE MTNS. INTERIOR	L	L	M	H	H	H	H	L	H	L	M	M	L	Closed	Veg., Wildlife Other Rec. Use
35. TURTLE MTNS. PERIMETER	L	M	L	L	L	M	H	?	L	L	M	M	H	Designated Roads & Trails	Arch. & Vehicle Rec.
36. OLD WOMAN MOUNTAINS	L	L	L	M	M	H	H	M	L	L	H	H	H	Designated Roads & Trails	Wildlife, Arch. & Vehicle Rec.

on their relatively uniform capacity to resist impact. The open alternative to the entire plan is too simplistic. More limited areas of land open to off-road vehicle use are considered in the proposed plan.

The second alternative would be to allow RV use only on roads and trails. Such an alternative would be more protective of environmental values than the proposed plan. It would, however, severely limit the satisfactions of the RV users. The degree of protection afforded by this alternative would depend largely on which roads were designated for RV use. Closing roads which afford access to fragile environmental values would protect those values the most. This would also protect the solitude values of the desert. In the evolution of the proposed plan this alternative was not pursued, primarily because it did not allow for the satisfaction of certain groups of RV users. It did not consider that some areas have been used for some time. It was assumed that further unrestrictive use in certain soils and ecological habitats would not produce greater damage and would result in even more preservation of environmental values than to open the desert to roads and trails. This alternative is unpopular to even the wilderness user who must drive on roads to get to the primitive areas. Therefore, this alternative would not be a total solution to the RV use problem. It is desirable to close certain areas where resource values are extremely fragile. Boundaries of such areas were considered in the evolution of the proposed plan.

The third alternative is to "close" the entire desert. This is infeasible in light of opposition from almost all user groups. Closing existing roads may result in certain improvements in the environment. Once vehicles are removed the source of impact is also removed and if the damage is not already irreversable improvement would slowly take place. Although closing the entire desert is not feasible, closing smaller areas is desirable and possible. The only way to preserve an area as an ecological study area and biological control site is to close it to man's impacts. The boundaries of such ecological study areas should be consistent with ecosystem boundaries. For example allowing RV use high in a watershed would impact a study area lower in the watershed.

Another alternative considered was to create some other combination of the various alternatives described above other than the proposed program. The possible numbers of combinations of open, closed, designated roads, and existing roads and trails areas are almost infinite. The other alternatives listed above serve mainly to bracket the proposed plan and philosophies. They show the extremes of philosophies of management, both toward the end of preserving the environment and, on the other hand, of exploiting it for immediate use. Many alternative combinations were considered in evolving the final proposed plan and program.

D. ANALYZING THE PLAN AND ALTERNATIVES BY SPECIFIC RESOURCES AND VEHICLE USE DESIGNATIONS.

Key resource analysis section analyzes the potential impact of RV's on resources and vehicle use experiences. In this section the specific impact on each resource of alternative vehicle use designations is detailed.

A high, medium and low rating as well as a summary narrative was included in each resource analysis for each alternative vehicle use designation. The alternative vehicle use designations included are "closed," "open," "existing roads and trails" and "designated roads and trails."

The "Special design" vehicle use designation was included in the existing roads and trails designation. In special design areas "existing roads and trails" will be used until the area can be studied further. Recreational vehicles are prohibited from driving off-road. This category was necessary for several reasons, including, (1) Use conflicts can only be resolved by detailed zoning. The level of required detail is too refined to be shown on the generalized level of planning and mapping used in the other vehicle use designations; (2) The precise boundaries of certain high value resources; (e.g., archaeology, wildlife habitats, etc.) were unknown. Once detailed, boundaries may be drawn around the high value resources and the remainder of the land would be placed under less restrictive use designations. Had such areas not been classed as special design they might have been designated "closed." Here the attempt was to give maximum consideration to the RV enthusiasts preference while maintaining acceptable resource quality; and (3) Current detailed studies are underway on some special design areas but they have not yet been completed.

In all special design areas a comprehensive environmental analysis will be required before new vehicle use designations can be implemented. Such an analysis, complete with current public input, must be completed. Thus the only question to be raised here is whether the "existing roads and trails" category affords adequate protection of resources in the interim until specialized plans can be completed. These specialized plans may take several years. The main possibility of environmental protection lies with the publics willingness to protect resources.

1. Soils.

a. Rating Considerations.

(1) The percentage of each soil association within the vehicle use areas was estimated.

(2) Each soil association was rated high, medium or low in impact and the total of high, medium and low impact ratings within each area was evaluated.

(3) If an area contained several different impact susceptibilities - for example - 40% high, 20% medium and 40% low - it would be rated medium by averaging the different impacts.

(4) A productivity rating was made for each soil association and was shown as a separate rating.

(5) Some areas with special problems, such as dust were recognized and evaluated.

b. Impacts.

(1) Closed -

If vehicles are kept off the soil no impact will result.

(2) Open -

Under this designation the impact on soils varies from high to low. Areas which are susceptible to RV damage will be greatly affected by compaction, causing a reduction in plant growth, reduction in moisture infiltration, and percolation and increased surface runoff. Also the disturbance of stable surface conditions increases potential wind and water erosion. The high impact areas include soils on alluvial fans with textures of coarse fragments and soil particles making them highly resistant to compaction. Areas like the sand dunes and washes are in this category.

(3) Designated Road and Trails -

Here the impact on soils could be kept to a minimum by selecting roads and trails in areas which are most resistant to RV use. However this criteria will be only one of several. There is no assurance that RV use will completely avoid damageable soils.

(4) Existing Roads and Trails -

Under this designation the impact on soils varies from high to low. There are large areas of high impact soils in this designation but the total impact depends on the amount of existing roads and trails within each area.

Soils

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		N	L	L	M
5	Darwin Falls		N	L	L	L
10	Tortoise Preserve		N	L	L	M
17	Amargosa Canyon		N	L	L	H
22	Clark Mountain		N	N	N	L
24	Kelso Dunes		N	L	L	L
31	Bigelow Cholla		N	L	L	M
33	Whipple Mountains		N	L	L	L
34	Turtle Mountains Interior		N	L	L	L
43	Desert Lily		N	L	L	M
51	Orocopia Mountains		N	N	N	L
53	Mecca Hills Interior		N	L	L	H
54	Salt Creek		N	L	L	L
57	San Sebastian Marsh		N	L	L	M
63	Crucifixion Thorn		N	L	L	M
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	L	L	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	N	L	L
8	Dove Springs		M	N	M	L
11	Rand Mountains/Spangler Hills	Open	M	N	M	L
18	Dumont Dunes N.W.		L	N	L	L
30	Upper Johnson Valley	Open	M	N	M	L
37	Cadiz Valley/Danby Lake	BLM	L	N	L	L
45	Ford Dry Lake	BLM	M	N	M	L
46	McCoy Valley		M	N	M	L
47	Little Chuckwalla Mountains		M	N	L	L
49	Chiriaco Summit		L	N	L	L
60	Plaster City	BLM	M	N	M	L
65	Mammoth Wash		L	N	L	L
68	Glamis/Imperial Sand Dunes (South)	BLM	L	N	L	L
70	Buttercup Valley		L	N	L	L

Soils

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	OPEN	CLOSED
3	Saline-Panamint		L	L	M	N
6	Walker Pass/El Paso		L	M	M	N
7	Lone Tree Canyon		L	M	H	N
12	Randsburg/Johannesburg		L	L	L	N
13	Trona Pinnacles		L	L	H	N
16	Calico/Coyote Lake		L	M	M	N
20	Kingston Mountains		L	L	L	N
23	Eastern Mojave		L	M	M	N
35	Turtle Mountains Perimeter		L	M	M	N
36	Old Woman Mountains		L	L	L	N
39	East Morongo		L	L	L	N
40	Whitewater		L	M	H	N
41	Bighorn		L	M	H	N
42	Grapevine		L	M	H	N
48	Big Chuckwalla Mountains		L	L	L	N
50	Orocopia Foothills		L	L	L	N
55	Santa Rosa Mountains		L	L	L	N
59	Coyote Mountain		L	L	M	N
61	Yuha Basin		L	M	M	N
71	Picacho		L	L	M	N

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
14	Red Mountain/Cuddeback	BLM	M	L	M	N
15	Fremont Peak	BLM	M	L	M	N
--	All national resource land not otherwise designated		M	L	H	N

Soils

A .	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			EXISTING ROADS & TRAILS (Special Design)	DESIGNATED ROADS & TRAILS	OPEN	CLOSED
	Eureka Dunes		L	L	M	N
	Jawbone Canyon		H	L	H	N
	Dumont Dunes		H	L	H	N
	Ivanpah Valley	BLM	M	L	M	N
	Mojave Basin	BLM	M	L	M	N
	El Mirage Lake		L	L	L	N
	Shadow Mountains	BLM	M	L	M	N
	Kramer Hills/Iron Mountain	BLM	L	L	L	N
	Stoddard Valley	BLM	M	L	M	N
	Needles	BLM	M	L	H	N
	Dale District		L	L	L	N
	Palen Dry Lake	BLM	M	L	M	N
	Mecca Foothills		H	L	H	N
	San Felipe/Superstition Hills	BLM	M	L	M	N
	Navy Lease	BLM	L	L	L	N
	Davies Valley		L	L	L	N
	Pinto Wash	BLM	M	L	M	N
	East Mesa	BLM	M	L	M	N
	Plank Road		L	L	L	N

2. Geology.

a. Rating. The key factors considered were stability of the feature and its surface expression. Stability is governed by the character of the rock formation--soft unconsolidated formation are easily marred or obliterated. The surface expression can be unique or visually striking.

The California Desert province, an area larger than many of the eastern states, is a store-house of unique geological occurences. Sand dunes, volcanic flows and cones, playas, ancient wave-cut terraces, fault structures, tufa pinnacles, desert pavement, rock-collecting sites and mountain ranges offer a broad array of geologic features.

Mineral resources are not vulnerable to RV use. Modern mineral exploration methods require RV use. Some of these techniques are: geochemical, magnetometer and seismic surveys, drilling, trenching and geologic mapping. These activities require an on the ground presence with technical equipment and operators.

Though the resource is not vulnerable to RV use, the means of mineral development, such as, shafts, trenches and drillhole collars are vulnerable and are a hazard to the RV user. Mining equipment and claim boundary markers and location notices are frequently vandalized and destroyed.

Unique geological features are not an unlimited resource. These natural occurrences require long periods of geologic time to develop surface expression and once marred and disturbed are not renewable.

A descriptive discussion of each unique geologic feature will show its vulnerability to RV use.

(1) Sand dunes -- Some of the best examples of these rare features are located in the California Desert. Their steep slopes and unconsolidated composition are attractive to RV use. As long as a sand source remains and strong winds prevail RV use may not be permanently destructive. The dunes seem to have the ability to recover from use.

(2) Playas -- These flat clay-silt valley floors are common. Continual RV use leads to a maize of tracks and ruts. Healing of these marrings requires a long time. Preserving an unmarred playa requires closing of the area to RV use.

(3) Ancient lake terraces. -- These mark the shore lines of ancient lakes and are not renewable. Good

examples are rare and are not too discernible to most RV users. Being composed mainly of unconsolidated silt, sand, and gravel sediments they are easily marred and destroyed.

In addition to ancient lake terraces there are a few uplifted ancient lake beds. Wind and water erode these fine grained clay-silt beds to form a variety of rounded knolls. These are attractive to RV users. Good examples of unmarred lake bed knolls are present in Amargosa Canyon. Good examples of marred, over used knolls are seen north of Tecopa and along the highway from Ridgecrest to Searles lake.

(4) Desert pavement -- These gently sloped flat topped terraces are the product of wind and water removal of silt and leaving a residual layer of flat topped angular rock fragments. RV users are attracted to driving on them because, as the name implies, they are smooth surfaced. Repair to rutted desert pavement requires many years of unique differential erosion.

(5) Fault scarps -- Those that have expressions in soft unconsolidated rock formations are readily destroyed by RV users. They are attractive to such users because of the abrupt change in land surface. They are not sought by the user over and above other similar appearing erosion surfaces. They are important to science for ground movement measurements and study areas.

(6) Badlands -- These are not common and are generally situated along the trend of fault zones. They develop best in unconsolidated soft sediments where water erodes a maize of shallow gulleys. They are attractive to RV users because of the driving experience. Most bad lands, being along fault zones, have tilted and arched rock formations. They are popular geologic study areas.

(7) Rock collecting sites -- Due to the numerous rock formations and mineralized zones in the California Desert, rock collecting sites are relatively common. Other than the depletion caused by over collecting they are not vulnerable to RV use. Collection of mineral specimens and colorfully textured rocks is a popular hobby and these natural exposures and old mine dumps are attractive to RV users.

(8) Lava flows, cones and craters -- These are not common geologic features and occur mainly in the area from Daggett to Amboy. They are extremely rough surfaced and are not attractive as a driving experience. Volcanic ash sediments are soft and unconsolidated and are readily marred. They are renewed only with renewed volcanic activity.

b. Impacts. It is assumed that regardless of the designated use, national resource land will remain unrestricted to motorized access to those engaged in mineral prospecting. The effects of vehicles used for the purpose are similar to those of recreational vehicles. Therefore continued allowance of this use may reduce the effectiveness of this plan.

Human interest in geological phenomenan focuses on those features that are unique or striking. The range in types and variation of geological phenomenan makes it difficult to generalize. However, individual features can be protected when properly identified and a management concept applied to the area.

Closed -

If vehicles will be kept off the geological features no impact will result.

Open -

The designation would have the greatest impact on geological resources. High value geological resource, would be damaged irrepairably. Mitigation measures would be difficult to formulate and maintain.

Restricted -

This designation will minimize further impact on geological features. It is assumed that under roads and trails have already been scared.

Geology
IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		L	L	L	M
5	Darwin Falls		L	L	L	L
10	Tortoise Preserve		L	L	L	L
17	Amargosa Canyon		L	M	L	M
22	Clark Mountain		L	L	L	L
24	Kelso Dunes		L	L	L	L
31	Bigelow Cholla		L	L	L	L
33	Whipple Mountains		L	L	L	L
34	Turtle Mountains Interior		L	L	L	?
43	Desert Lily		L	L	L	L
51	Orocopia Mountains		L	M	L	H
53	Mecca Hills Interior		L	M	L	H
54	Salt Creek		L	L	L	L
57	San Sebastian Marsh		L	L	L	L
63	Crucifixion Thorn		L	L	L	L
66	Glamis/Imperial Sand Dunes (North)		L	L	L	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	L	L	L
8	Dove Springs		H	L	L	L
11	Rand Mountains/Spangler Hills	Open	L	L	L	L
18	Dumont Dunes N.W.		L	L	L	L
30	Upper Johnson Valley	Open	L	L	L	L
37	Cadiz Valley/Danby Lake	BLM	L	L	L	L
45	Ford Dry Lake	BLM	L	L	L	L
46	McCoy Valley		L	L	L	L
47	Little Chuckwalla Mountains		L	L	L	L
49	Chiriaco Summit		L	L	L	L
60	Plaster City	BLM	L	L	L	L
65	Mammoth Wash		L	L	L	L
68	Glamis/Imperial Sand Dunes (South)	BLM	L	L	L	L
70	Buttercup Valley		L	L	L	L

Geology

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	OPEN	CLOSED
3	Saline-Panamint		L	M	M	L
6	Walker Pass/El Paso		L	M	H	L
7	Lone Tree Canyon		L	L	L	L
12	Randsburg/Johannesburg		L	L	L	L
13	Trona Pinnacles		L	M	H	L
16	Calico/Coyote Lake		L	L	M	L
20	Kingston Mountains		L	L	L?	L
23	Eastern Mojave		L	M	H?	L
35	Turtle Mountains Perimeter		L	L	L	L
36	Old Woman Mountains		L	L	L	L
39	East Morongo		L	L	L	L
40	Whitewater		L	L	L	L
41	Bighorn		L	L	L	L
42	Grapevine		L	L	L	L
48	Big Chuckwalla Mountains		L	L	L	L
50	Orocopia Foothills		L	L	L	L
55	Santa Rosa Mountains		L	L	L	L
59	Coyote Mountain		L	M?	H	L
61	Yuha Basin		L	M	H	L
71	Picacho		L	L	L	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
14	Red Mountain/Cuddeback	BLM	L	L	L	L
15	Fremont Peak	BLM	L	L	L	L
--	All national resource land not otherwise designated		L	L	L	L

Geology

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		L	L	M	L
9	Jawbone Canyon		L	L ?	L?	L
19	Dumont Dunes		L	L ?	L	L
21	Ivanpah Valley	BLM	L	L	L	L
25	Mojave Basin	BLM	L	L	L	L
26	El Mirage Lake		L	L	L	L
27	Shadow Mountains	BLM	L	L	L	L
28	Kramer Hills/Iron Mountain	BLM	L	L	L	L
29	Stoddard Valley	BLM	L	L	L	L
32	Needles	BLM	L	L	L	L
38	Dale District		L	L	L	L
44	Palen Dry Lake	BLM	L	L	M	L
52	Mecca Foothills		L	L	L	L
56	San Felipe/Superstition Hills	BLM	L	L	H	L
58	Navy Lease	BLM	L	L	L	L
62	Davies Valley		L	L	L	L
64	Pinto Wash	BLM	L	L	L	L
67	East Mesa	BLM	L	L	L	L
69	Plank Road		L	L	L	L

3. Impacts on Water. The vehicle use areas were not systematically rated for potential impacts on water. This is primarily because of very limited availability of information. BLM staff specialists with their admittedly limited knowledge of hydrology and watershed and water quality agree that recreational vehicle use does not increase the potential of flood damage significantly. It should be noted, that flood damage under heavy rainfall conditions exist in the desert as a natural condition. Recreational vehicle impacts on the quality of water are not known.

4. Air Quality.

a. Rating.

(1) The types of air pollutants present, Hydrocarbon emissions and photo-chemical smog, are considered more severe air pollutants than particulates.

(2) Certain desert areas are considered more susceptible to pollution if they are already effected by non-RV caused pollution. Some areas receive photo-chemical smog from the Los Angeles Basin. Additional pollution by RV's may cause total air pollution to reach critical levels.

(3) Dust and blowing sand caused by RV's has been a subject of desert resident complaints.

(4) Dust and blowing sand can cause reduced visibility and accidents along desert highways. The distance between RV use areas and highways were considered.

(5) RV's run on well compacted dirt roads produce less dust than on unconsolidated compactible soils.

(6) Exposing of soils by cultivation practices, home and road construction, and industrial plants operations add to the RV effects to determine the total air pollution potential.

(7) The air pollution effects of hydrocarbons emitted from RV's should not be ignored. Isolated valleys may have inversion layers holding and concentrating the pollutants. The shape of the valleys and orientation to prevailing wind direction and intensity is considered.

b. Impacts.

(1) Closed -

If vehicles are kept from an area no increase in air pollution can be attributed to them. If the land was bared to wind erosion prior to closure then that erosion may continue. Closure would eventually result in a stabilization of the soil to resist wind removal.

(2) Open -

If the soils are erodable and the particles small enough to become wind borne air pollution most certainly will result. To the extent that open areas were selected to avoid fragile soils the dust pollution may be somewhat lessened.

The open areas also might attract great concentrations of RV enthusiasts which in turn will cause a potentially damaging air pollution effect. At some threshold of vehicle use intensity the harmful effects of exhaust emissions and the resulting photo-chemical smog may be felt. The degree of intensity is unknown.

(3) Designated Roads and Trails -

This designation may decrease air pollution below present levels. RV users will be prevented from impacting fragile soils off of the road. To the extent that highly erodable dirt roads are closed the air pollution may likewise decrease.

(4) Existing Roads and Trails -

This designation may also decrease air pollution below present levels. RV users will be kept on the roads and away from fragile soils. This designation is very similar in effect to the "Designated Road and Trails," except highly erodable roads will remain in use and inhabited desert areas might be impacted to a greater extent.

Air Quality

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		L	L	L	L
5	Darwin Falls		L	L	L	L
10	Tortoise Preserve		L	L	L	L
17	Amargosa Canyon		L	L	L	L
22	Clark Mountain		L	L	L	M
24	Kelso Dunes		L	L	L	L
31	Bigelow Cholla		L	L	L	M
33	Whipple Mountains		L	L	L	L
34	Turtle Mountains Interior		L	L	L	M
43	Desert Lily		L	M	L	M
51	Orocopia Mountains		L	M	M	H
53	Mecca Hills Interior		L	M	M	H
54	Salt Creek		L	M	M	H
57	San Sebastian Marsh		L	M	M	M
63	Crucifixion Thorn		L	L	L	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	L	L	L	M

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	L	L	L	L
8	Dove Springs		L	L	L	L
11	Rand Mountains/Spangler Hills	Open	L	L	L	L
18	Dumont Dunes N.W.		L	L	L	L
30	Upper Johnson Valley	Open	L	L	L	L
37	Cadiz Valley/Danby Lake	BLM	L	L	L	L
45	Ford Dry Lake	BLM	L	L	L	L
46	McCoy Valley		H	L	L	L
47	Little Chuckwalla Mountains		L	L	L	L
49	Chiriaco Summit		H	L	L	L
60	Plaster City	BLM	M	L	L	L
65	Mammoth Wash		M	L	L	L
68	Glamis/Imperial Sand Dunes (South)	BLM	M	L	L	L
70	Buttercup Valley		M	L	L	L

Air Quality

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		L	L	L	L
6	Walker Pass/El Paso		L	L	L	L
7	Lone Tree Canyon		L	L	L	L
12	Randsburg/Johannesburg		M	M	H	L
13	Trona Pinnacles		L	L	L	L
16	Calico/Coyote Lake		L	L	M	L
20	Kingston Mountains		L	L	L	L
23	Eastern Mojave		L	L	L	L
35	Turtle Mountains Perimeter		L	L	L	L
36	Old Woman Mountains		L	L	L	L
39	East Morongo		L	L	L	L
40	Whitewater		L	L	M	L
41	Bighorn		L	L	M	L
42	Grapevine		L	L	M	L
48	Big Chuckwalla Mountains		L	L	L	L
50	Orocopia Foothills		L	L	H	L
55	Santa Rosa Mountains		L	L	H	L
59	Coyote Mountain		L	L	M	L
61	Yuha Basin		L	L	L	L
71	Picacho		L	L	L	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	L	L	L	L
15	Fremont Peak	BLM	L	L	L	L
--	All national resource land not otherwise designated					

Air Quality

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		L	L	L	L
M, 9	Jawbone Canyon		L	L	L	L
19	Dumont Dunes		L	L	L	L
21	Ivanpah Valley	BLM	L	L	M	L
25	Mojave Basin	BLM	L	L	L	L
26	El Mirage Lake		L	L	L	L
27	Shadow Mountains	BLM	M	M	M	L
28	Kramer Hills/Iron Mountain	BLM	L	L	L	L
29	Stoddard Valley	BLM	L	L	L	L
32	Needles	BLM	L	L	H	L
38	Dale District		L	L	L	L
44	Palen Dry Lake	BLM	L	L	M	L
52	Mecca Foothills		M	M	H	L
56	San Felipe/Superstition Hills	BLM	M	M	M	L
58	Navy Lease	BLM	M	M	M	L
62	Davies Valley		L	L	L	L
64	Pinto Wash	BLM	L	L	L	L
67	East Mesa	BLM	L	L	M	L
69	Plank Road		L	L	M	L

5. Vegetation/Wildlife Habitats.

a. Ratings. Within any of the vegetation communities, there will be specific factors which cause vulnerability in generally damage-resistant communities, or; factors which lend resistance to normally vulnerable communities. The criteria used for evaluating potential damage to habitats are,

(1) Vulnerability of individual sites by terrain, location, access or attractiveness to people.

(2) Importance of plant species or plant communities to other vegetation dependent resources.

(3) Tendency of vehicle operators to avoid natural obstacles that might damage person or vehicle.

b. Impacts.

(1) Closed -

In previously unused habitats, closure results in no change. In previously used habitats, revegetation of disturbed roads, trails and sites may begin with resprouting of damaged perennial species and a spread of annual herbaceous species into distrubed areas.

(2) Open -

Natural aspect will continue to deteriorate at a rate dependent upon the accessibility and popularity of the area involved. Habitat deterioration will favor certain species at certain levels of change. However, in the long run certain sites may become totally unproductive as habitat.

(3) Designated Road and Trails -

By designating roads and trails, habitat damage can be arrested and revegetation can begin on certain previously used tracts or sites.

(4) Existing Roads and Trails -

Under this designation, a certain amount of habitat deterioration can be expected in the form of trail widening. However, deterioration will be halted in terms of new trails. Erosion-caused deterioration, influenced by the trails will continue.

Vegetation/Wildlife Habitats

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		N+	L	N	H
5	Darwin Falls		N+	N	N+	H
10	Tortoise Preserve		N+	L	N	M
17	Amargosa Canyon		N+	L	N	H
22	Clark Mountain		N	L	N	M
24	Kelso Dunes		N+	L	N+	L
31	Bigelow Cholla		N	L	N	L
33	Whipple Mountains		N+	L	N	L
34	Turtle Mountains Interior		N+	M	N+	H
43	Desert Lily		N	N	N	L
51	Orocopia Mountains		N+	L	N	L
53	Mecca Hills Interior		N+	L	N	L
54	Salt Creek		N+	M	N	H
57	San Sebastian Marsh		N+	M	L	H
63	Crucifixion Thorn		N	N	N	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N+	M	N+	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	L	N+	L	N
8	Dove Springs		H	N+	H	L
11	Rand Mountains/Spangler Hills	Open	M	N+	L	N+
18	Dumont Dunes N.W.		L	N+	L	N
30	Upper Johnson Valley	Open	M	N+	L	N+
37	Cadiz Valley/Danby Lake	BLM	L	N+	L	N+
45	Ford Dry Lake	BLM	L	N+	L	N+
46	McCoy Valley		L	N+	L	N+
47	Little Chuckwalla Mountains		L	N+	L	N+
49	Chiriaco Summit		L	N+	L	N+
60	Plaster City	BLM	L	N+	L	N+
65	Mammoth Wash		L	N+	L	N
68	Glamis/Imperial Sand Dunes (South)	BLM	H	N+	L	N
70	Buttercup Valley		H	N+	L	N+

Vegetation/Wildlife Habitats

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		L	M	H	N
6	Walker Pass/El Paso		N+	L	H	N+
7	Lone Tree Canyon		N+	L	L	N+
12	Randsburg/Johannesburg		N+	L	L	N+
13	Trona Pinnacles		N	L	L	N
16	Calico/Coyote Lake		N	L	L	N+
20	Kingston Mountains		N+	L	M	N+
23	Eastern Mojave		N+	L	H	N+
35	Turtle Mountains Perimeter		N+	L	L	N+
36	Old Woman Mountains		N	L	M	N+
39	East Morongo		N	L	M	N+
40	Whitewater		N	L	M	N+
41	Bighorn		N+	L	M	N+
42	Grapevine		N+	L	M	N+
48	Big Chuckwalla Mountains		N+	L	L	N+
50	Orocopia Foothills		N+	L	L	N+
55	Santa Rosa Mountains		N	L	L	N+
59	Coyote Mountain		N+	L	L	N+
61	Yuha Basin		N+	L	L	N+
71	Picacho		N+	L	L	N+

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	L	N+	L	N+
15	Fremont Peak	BLM	L	N+	L	N+
--	All national resource land not otherwise designated					

Vegetation/Wildlife Habitats

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		L	N	M	N+
9	Jawbone Canyon		L	N+	H	N+
19	Dumont Dunes		L	N	L	N+
21	Ivanpah Valley	BLM	L	N+	L	N+
25	Mojave Basin	BLM	L	N+	L	N+
26	El Mirage Lake		L	N+	L	N+
27	Shadow Mountains	BLM	L	N+	H	N+
28	Kramer Hills/Iron Mountain	BLM	L	N+	L	N+
29	Stoddard Valley	BLM	L	N+	M	N+
32	Needles	BLM	L	N+	M	N+
38	Dale District		L	N+	L	N+
44	Palen Dry Lake	BLM	L	N+	L	N+
52	Mecca Foothills		L	N+	L	N+
56	San Felipe/Superstition Hills	BLM	L	N+	L	N+
58	Navy Lease	BLM	L	N+	L	N+
62	Davies Valley		L	N+	H	N+
64	Pinto Wash	BLM	L	N+	L	N+
67	East Mesa	BLM	L	N+	L	N+
69	Plank Road		L	L	H	N

6. Vegetation.

a. Ratings. The criteria used for evaluating potential damage to vegetation are,

(1) Vulnerability of plant species by growth form, distribution, density or armament.

(2) Presence of rare, endangered or unique plant species.

b. Impacts.

(1) Closed -

In previously unused vegetative types, closure will result in no change. In previously used areas, revegetation will begin with the resprouting of some damaged perennial species and a spread of annual herbaceous species into disturbed sites such as roads, trails and camp sites. Eventually perennial seedlings will invade the disturbed sites.

(2) Open -

The perennial plant species which are vulnerable to damage because of size and growth form can be expected to continue to decline in numbers. Annual plant species can be expected to increase in numbers as competition for moisture and nutrients decreases. In certain concentrated use areas, soil loss and compaction will even inhibit annual plant production.

(3) Designated Roads and Trails -

As with special design, resource recovery can be effected by designating the proper roads and trails.

(4) Existing Roads and Trails -

Under this designation, no resource recovery can be expected. However, additional plant losses will be minimal, resulting from trail widening and soil movement caused by the trails.

Vegetation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		N	L	L	H
5	Darwin Falls		N+	M	L	H
10	Tortoise Preserve		N+	L	L	M
17	Amargosa Canyon		N+	M	L	H
22	Clark Mountain		N	N	N	L
24	Kelso Dunes		N+	M	N	M
31	Bigelow Cholla		N	L	N	L
33	Whipple Mountains		N	L	N	L
34	Turtle Mountains Interior		N	H	L	H
43	Desert Lily		N	N	N	H
51	Orocopia Mountains		N	L	N	L
53	Mecca Hills Interior		N	L	N	L
54	Salt Creek		N+	L	N+	H
57	San Sebastian Marsh		N+	L	N+	H
63	Crucifixion Thorn		N	N	N	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N+	M	N+	M

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			OPEN	CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	L	N	L	N
8	Dove Springs		H	N+	M	N+
11	Rand Mountains/Spangler Hills	Open	L	N+	L	N+
18	Dumont Dunes N.W.		L	N+	L	N
30	Upper Johnson Valley	Open	L	N+	L	N+
37	Cadiz Valley/Danby Lake	BLM	L	N+	L	N+
45	Ford Dry Lake	BLM	L	N+	L	N+
46	McCoy Valley		L	N+	L	N+
47	Little Chuckwalla Mountains		L	N+	L	N+
49	Chiriaco Summit		L	N+	L	N+
60	Plaster City		L	N+	L	N+
65	Mammoth Wash		L	N+	L	N+
68	Glamis/Imperial Sand Dunes (South)	BLM	M	N+	L	N+
70	Buttercup Valley		M	N+	L	N+

Vegetation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		N	L	H	N
6	Walker Pass/El Paso		L	M	H	N+
7	Lone Tree Canyon		L	L	M	N+
12	Randsburg/Johannesburg		N+	L	L	N+
13	Trona Pinnacles		N+	N	L	N+
16	Calico/Coyote Lake		N+	L	L	N+
20	Kingston Mountains		N	L	L	N
23	Eastern Mojave		N+	M	H	N+
35	Turtle Mountains Perimeter		N+	L	L	N+
36	Old Woman Mountains		N	L	M	N+
39	East Morongo		N+	L	M	N+
40	Whitewater		N	L	M	N+
41	Bighorn		N+	L	M	N+
42	Grapevine		N+	L	M	N+
48	Big Chuckwalla Mountains		N+	L	L	N+
50	Orocopia Foothills		N+	L	L	N+
55	Santa Rosa Mountains		N	L	L	N+
59	Coyote Mountain		N+	L	L	N+
61	Yuha Basin		N+	L	L	N+
71	Picacho		N+	L	L	N+

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	L	N+	L	N+
15	Fremont Peak	BLM	L	N+	L	N+
--	All national resource land not otherwise designated					

Vegetation

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		M	L	H	N+
9	Jawbone Canyon		L	N+	M	N+
19	Dumont Dunes		L	N	L	N+
21	Ivanpah Valley	BLM	L	N+	L	N+
25	Mojave Basin	BLM	L	N	L	N+
26	El Mirage Lake		L	N+	L	N+
27	Shadow Mountains	BLM	L	N+	M	N+
28	Kramer Hills/Iron Mountain	BLM	L	N+	L	N+
29	Stoddard Valley	BLM	L	N+	M	N+
32	Needles	BLM	L	N	L	N+
38	Dale District		L	N	L	N+
44	Palen Dry Lake	BLM	L	N+	L	N+
52	Mecca Foothills		L	N+	L	N+
56	San Felipe/Superstition Hills	BLM	L	N+	L	N+
58	Navy Lease	BLM	L	N+	L	N+
62	Davies Valley		M	N+	H	N+
64	Pinto Wash	BLM	L	N+	L	N+
67	East Mesa	BLM	L	N+	L	N+
69	Plank Road		N	N+	M	N+

7. Wildlife.

a. Ratings.

(1) Low Impact: Potential impact on wildlife values is considered low when:

(a) The animal density is too low to expect irretrievable damage to the species or its habitat.

(b) The species are very common and relatively tolerant of human activities.

(c) The nature of the habitat precludes RV influence on the animals.

(2) Medium Impact: Potential impact on wildlife values is considered medium when:

(a) Animal density or diversity is at a point where RV activity will cause some physical damage to the animal or a component of its habitat, directly or indirectly.

(b) The species are relatively uncommon or are somewhat intolerant of human interference.

(c) Access to important habitat is good, though site may be remote.

(3) High Impact: Potential impact on wildlife values is considered high when:

(a) Animal density or diversity is at a point that RV activity will probably cause irretrievable damage to some habitat component, directly or indirectly.

(b) The species are unique and intolerant of human interference.

(c) The habitat is vulnerable and attractive to human recreationists, and important to a diversity of species.

b. Impacts.

Closed -

This concept would favor natural selection and wilderness habitat. For the most part, wildlife will thrive under this concept. However, care must be taken when establishing closed areas in order to ensure that management facilities for habitat enhancement can be maintained, populations in the threatened category can be monitored, and species managed on a harvest basis can be hunted.

Open -

The "open" concept would have the greatest impact on the Wildlife Resource, and would be the most harmful alternative in areas where there are significant wildlife values.

Restricted -

The "restricted" designation, perhaps the most difficult to administer, if used wisely can protect the resource while permitting use. Wildlife values can be protected -- damage can be minimized or mitigated. Management under this concept will be the most difficult, yet will probably offer the greatest flexibility of uses.

Wildlife

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		L	L	L	H
5	Darwin Falls		L	L	L	H
10	Tortoise Preserve		L	M	L	H
17	Amargosa Canyon		L	M	L	H
22	Clark Mountain		L	L	L	M
24	Kelso Dunes		L	M	L	H
31	Bigelow Cholla		L	L	L	L
33	Whipple Mountains		L	L	L	M
34	Turtle Mountains Interior		L	H	L	H
43	Desert Lily		L	L	L	L
51	Orocopia Mountains		L	L	L	H
53	Mecca Hills Interior		L	L	L	L
54	Salt Creek		L	H	L	H
57	San Sebastian Marsh		L	L	L	L
63	Crucifixion Thorn		L	L	L	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	L	NA	NA	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	L	L	L	L
8	Dove Springs		H	L	M	L
11	Rand Mountains/Spangler Hills	Open	M	L	M	L
18	Dumont Dunes N.W.		M	L	L	L
30	Upper Johnson Valley	Open	M	L	L	L
37	Cadiz Valley/Danby Lake	BLM	L	L	L	L
45	Ford Dry Lake	BLM	H	L	M	L
46	McCoy Valley		H	L	M	L
47	Little Chuckwalla Mountains		M	L	M	L
49	Chiriaco Summit		M	L	L	L
60	Plaster City	BLM	L	L	L	L
65	Mammoth Wash		H	L	NA	L
68	Glamis/Imperial Sand Dunes (South)	BLM	H	L	NA	L
70	Buttercup Valley		H	L	NA	L

Wildlife
IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		L	M	H	L
6	Walker Pass/El Paso		L	M	H	L
7	Lone Tree Canyon		?	?	?	L
12	Randsburg/Johannesburg		L	M	M	L
13	Trona Pinnacles		L	L	L	L
16	Calico/Coyote Lake		L	M	H	L
20	Kingston Mountains		L	L	M	L
23	Eastern Mojave		L	M	H	L
35	Turtle Mountains Perimeter		?	?	?	?
36	Old Woman Mountains		L	H	H	L
39	East Morongo		L	L	H	L
40	Whitewater		L	L	M	L
41	Bighorn		L	M	H	L
42	Grapevine		L	M	M	L
48	Big Chuckwalla Mountains		L	M	M	L
50	Orocopia Foothills		L	L	H	L
55	Santa Rosa Mountains		L	H	H	L
59	Coyote Mountain		L	L	L	L
61	Yuha Basin		L	L	M	L
71	Picacho		L	M	M	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	H	L	H	L
15	Fremont Peak	BLM	H	L	H	L
--	All national resource land not otherwise designated					

Wildlife

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
1	Eureka Dunes		NA	L	H	L
9	Jawbone Canyon		L	L	M	L
19	Dumont Dunes		NA	L	M	L
21	Ivanpah Valley	BLM	L	L	M	L
25	Mojave Basin	BLM	H	H	H	L
26	El Mirage Lake		L	L	L	L
27	Shadow Mountains	BLM	L	L	H	L
28	Kramer Hills/Iron Mountain	BLM	H	L	H	L
29	Stoddard Valley	BLM	L	L	M	L
32	Needles	BLM	L	L	H	L
38	Dale District		L	L	M	L
44	Palen Dry Lake	BLM	M	L	M	L
52	Mecca Foothills		L	L	L	L
56	San Felipe/Superstition Hills	BLM	L	L	L	L
58	Navy Lease	BLM	L	L	L	L
62	Davies Valley		L	L	H	L
64	Pinto Wash	BLM	L	L	L	L
67	East Mesa	BLM	H	L	H	L
69	Plank Road		L	L	H	L

c. NOTES ON IMPACT RATINGS: WILDLIFE

Area # 10: Tortoise Preserve: Under full time visitor use management, the area could function well under an "existing R & T" category. Even now, the area could be opened to 4 WD use, seasonally.

Area # 17: Amargosa Canyon: Here, too, under controlled visitor use and a regulation of speed and numbers, the area could be nicely opened to "existing R & T".

Area # 22: Clark Mountain: A de facto wilderness, little is to be gained by closing the area, as it is nearly impregnable, anyway. Noise levels, motorcycles, are biggest threat.

Area # 24: Kelso Dunes: Under a visitor use restriction (numbers) and management, portions of the dune system could be opened with little or no detrimental effects.

Area # 31: Bigelow Cholla: Inaccessible.

Area # 34: Turtle Mountains Interior: Again, visitor management would permit use here. Also, roads to be closed to vehicular travel can go to one mile from Springs.

Area # 66: Clamis/Imperial Sand Dunes (North): No wildlife reason for total closure. Visitor management could allow limited use.

Areas #28: Kramer Hills/Iron Mountain: Steps to protect Mojave ground squirrel and upland game.

Area # 36: Old Woman Mountains: Unfortunately, roads lead to mining claims and go to critical water sources as well.

8. Ecological Interrelationships. Ecological theory is discussed in the section on description of the existing environment. The available state of knowledge of ecological interrelationships is presented there. Adequate data is unavailable to systematically rate each vehicle use area.

Perhaps when future studies on special design areas and other areas are initiated, ecological interrelationship studies may be a part. Academic consultants so far give us only the most generalized data. Ecological relationships have been, to a limited degree, rated in other sections of this report. Specific reference to the dependence of plants on the soils is seen in the section on soils. In addition, the wildlife sections show specific dependence of certain animals on some plants. Enough information was available to give examples in these sections of general ecological philosophies. But again, information was unavailable for each area.

While previous sections give some indication of the standing crop biomass as well as general productivity, they do not treat the nutrient cycling, internal symbiosis, overall stability or resistance to external perturbations, or energy flow patterns. None of the latter are very well understood concerning the desert.

Because of the extreme lack of knowledge on ecological interrelationships, a least risk approach should be followed. General ecological theory suggests that when any one factor of the ecosystem is impacted the whole ecosystem can be expected to be impacted as well. Following this reasoning an impact on any individual resource should be considered an impact on the ecological interrelationships.

9. Aesthetics (Visual)

a. Criteria. Recreation vehicles may impact the desert landscape by their very presence in large numbers. The visual presence of concentrations of motorcycles, dune buggies and four-wheel drive vehicles are an intrusion and in a highly or "prime" scenic area will detract from the visual experience. The imapct is usually of short duration, however, and can be mitigated by prohibiting or restricting such use in highly scenic areas.

Vehicles also create tracks and trails which may detract from visual aesthetics. This manifestation of recreation vehicle activity may be of short duration, a few days or weeks, or it may take centuries for the evidence to disappear from the scene.

Sand dunes exemplify short duration disturbance. The desert winds return them to their natural state combed and fettled. Unfortunately a large percent of the desert surface material is not resilient. Incised desert pavement, removal of the patina from rock surfaces and tracks cut into soft sedementary material will remain for many years.

For the purpose of this evaluation, desert surfaces are divided into two categories. Those which return to their natural state in a short period "short duration" and those that do not "long duration."

Figure 30 was used to evaluate impact on scenery. The areas being rated were first classified "prime," "choice" or "common" using the Scenic Environmental Quality Figure 16, The duration criteria was then applied to the area to determine the level of impact in accordance with Figure 30 - high (H), medium (M) or low (L). For example, Red Rock Canyon located on Interstate Highway 14 is rated as a prime scenic area. This, coupled with the long duration of vehicle tracks on the highly colored exposed sandstones, resulted in a high level impact evaluation and the entry of an "H" on the rating sheet.

b. Impact on Visual Aesthetics.

Closed: This designation will prohibit vehicle access and protect the landscape against intrusions caused by vehicle use. Existing vehicle tracks and trails, will in time fade, returning the desert surface to its natural state.

Open: This designation will tend to cause the concentration of recreation vehicle activity and result in creation of more intrusions and thus continue the deterioration of visual quality. Some areas will be more heavily impacted than others because of surface conditions and topography.

Designated Roads and Trails and Existing Roads and Trails: These designations will restrict vehicular travel to roads and trails which already exist hence further deterioration of aesthetic values will be arrested. Restoration to the natural state can be managed in the Designated Roads and Trails areas by closing roads and trails to travel in areas where scenic enhancement is desired.

FIGURE 30

Visual Intrusion	Area Rating - Scenic Quality		
	Prime	Choice	Common
Non-Accessible Areas (Access Prohibited by Natural Terrain Features)	L	L	L
Short Duration (Features Such as Sand Dunes, Playas, Sandy Washes, etc.)	H	M	L
Long Duration (Features Such as Desert Pavement, Desert Varnish, Soft & Exposed Sedimentary Rocks, etc.)	H	H	L

Visual Aesthetics

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		L	L	L	H
5	Darwin Falls		L	H	H	H
10	Tortoise Preserve		L	L	L	L
17	Amargosa Canyon		L	H	H	H
22	Clark Mountain		L	L	L	L
24	Kelso Dunes		L	NA	NA	H
31	Bigelow Cholla		L	NA	NA	H
33	Whipple Mountains		L	L	L	H
34	Turtle Mountains Interior		L	NA	NA	H
43	Desert Lily		L	NA	NA	H
51	Orocopia Mountains		L	H	H	H
53	Mecca Hills Interior		L	H	H	H
54	Salt Creek		L	L	L	L
57	San Sebastian Marsh		L	M	M	H
63	Crucifixion Thorn		L	NA	NA	H
66	Glamis/Imperial Sand Dunes (North)	Op W/Con	L	NA	NA	M

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	L	L	L	L
8	Dove Springs		H	L	H	L
11	Rand Mountains/Spangler Hills	Open	L	L	L	L
18	Dumont Dunes N.W.		H	L	H	L
30	Upper Johnson Valley	Open	L	L	L	L
37	Cadiz Valley/Danby Lake	BLM	L	L	L	L
45	Ford Dry Lake	BLM	L	L	L	L
46	McCoy Valley		L	L	L	L
47	Little Chuckwalla Mountains		M	L	L	L
49	Chiriaco Summit		L	L	L	L
60	Plaster City	BLM	H	L	L	L
65	Mammoth Wash		H	L	H	L
68	Glamis/Imperial Sand Dunes (South)	BLM	H	L	H	L
70	Buttercup Valley		H	L	H	L

Visual Aesthetics

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	OPEN	CLOSED
3	Saline-Panamint		L	M	H	L
6	Walker Pass/El Paso		L	M	M	L
7	Lone Tree Canyon		L	M	M	L
12	Randsburg/Johannesburg		L	L	L	L
13	Trona Pinnacles		L	H	H	L
16	Calico/Coyote Lake		L	H	H	L
20	Kingston Mountains		L	H	H	L
23	Eastern Mojave		L	H	H	L
35	Turtle Mountains Perimeter		L	H	H	L
36	Old Woman Mountains		L	H	H	L
39	East Morongo		L	H	H	L
40	Whitewater		L	H	H	L
41	Bighorn		L	H	H	L
42	Grapevine		L	H	H	L
48	Big Chuckwalla Mountains		L	H	H	L
50	Orocopia Foothills		L	L	L	L
55	Santa Rosa Mountains		L	M	H	L
59	Coyote Mountain		L	H	H	L
61	Yuha Basin		L	L	L	L
71	Picacho		L	H	H	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
14	Red Mountain/Cuddeback	BLM	L	L	L	L
15	Fremont Peak	BLM	L	L	L	L
--	All national resource land not otherwise designated		L	L	L	L

Visual Aesthetics

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		H	L	H	L
9	Jawbone Canyon		H	L	H	L
19	Dumont Dunes		H	L	H	L
21	Ivanpah Valley	BLM	L	L	L	L
25	Mojave Basin	BLM	M	L	M	L
26	El Mirage Lake		L	L	L	L
27	Shadow Mountains	BLM	L	L	L	L
28	Kramer Hills/Iron Mountain	BLM	L	L	L	L
29	Stoddard Valley	BLM	H	L	H	L
32	Needles	BLM	M	L	M	L
38	Dale District		L	L	L	L
44	Palen Dry Lake	BLM	L	L	L	L
52	Mecca Foothills		H	L	H	L
56	San Felipe/Superstition Hills	BLM	M	L	M	L
58	Navy Lease	BLM	NA	NA	NA	NA
62	Davies Valley		H	L	H	L
64	Pinto Wash	BLM	L	L	L	L
67	East Mesa	BLM	L	L	L	L
69	Plank Road		H	L	H	L

10. Effects of RV Noise. Noise potential within vehicle use areas was not rated because of limited inventories upon which to base a quantitative evaluation. Noise is certainly an important factor as evidenced by many complaints of both non-RV users and some RV users.

Recreation vehicles have a varied noise impact on the desert. Motorcycles, dune buggies, four wheel drive vehicles have special sounds under varying conditions of speed, terrain difficulty, and mufflers. In the past with fewer vehicles, and fewer people in the desert some RV users enjoyed using the vehicle with little muffling effect. The sound of power "turned them on", so to speak. Now there is pressure to reduce noise to a level that does not annoy or disturb humans and other animals.

Recreation vehicle events have been especially disturbing to some because of the concentration of people and vehicles on the desert. However this concentration of vehicles and noise may be much more apparent in the city environment than in the desert. City streets and buildings amplify vehicle noises because of the many reflective surfaces. In the desert the opposite effect occurs because when sound is unrestricted it soon dissipates. Each doubling of the distance between source and receiver causes sound levels to drop by six decibels. (Lynch, 1961). Sound is also dispersed by turbulence and gusty winds. Physical barriers, such as trees, and hills, reduce sound movement.

The type of recreation vehicle event may have as much effect on the environment as the location of the event. Races in which the vehicles follow a route at relatively slow speeds, in a single lane, should have much less noise pollution impact than a simultaneous start on a massive front such as occurs in the Barstow to Las Vegas race.

Race events do have adverse effects on a limited area of the desert. A race such as the Barstow-Las Vegas unquestionably has a greater noise impact than most other events. A mass of motorcycles starting up and charging off on a packed line creates tremendous noise and confusion. In contrast, the "rally" competition because of lower speeds and spacing between vehicles results in less noise.

A third type of noise pollution would be that created by individual family riders traveling the desert trails and exploring the back country. This would normally have the least impact on the solitude of the desert because spacing between vehicles is great.

The one major resource of the desert that resists noise pollution is the vastness of the area. A few years ago anyone complaining about noise pollution or visual pollution would probably have been scoffed at or put down as a crank. Today we are wondering if a little noise pollution spread over the entire desert is better than heavy noise in a limited area.

A general observation is that most of the criticism against noise caused by RV's is directed against motorcycles. This is usually a result of the noise experienced around urban or suburban areas. This has been a relatively minor factor in the desert as compared to criticism about resource damage.

The "open" designation encourages those RV activities that are most noise producing. Restricted designations encourage lower speed and quieter RV activities. Even closed areas might be subject to noise of vehicles on adjacent areas. The vehicle use designations do not regulate the sound reducing devices installed on vehicles themselves.

11. Archaeological Resources.

a. Ratings. The criteria used for archaeological assessment were generally based on the following:

(1) Density and Abundance of Archaeological Resources. The relative density and abundance of an area's archaeological resources were determined by a review of the existing archaeological inventory records of BLM, San Bernardino County Museum, UCLA Archaeological Survey, and UC Riverside Archaeological Research Unit, as well as a review of available archaeological literature, both published and unpublished. Wherever possible, experts on the archaeology of the specific areas were consulted. When archaeological data for a particular area was non-existent, a rating based on knowledge of the density of archaeological resources in the surrounding area or on what is known about similar areas was given.

(2) Degree to Which Archaeological Resources Represent the Best Extent or Only Surviving Vestiges of Some Cultural Groups or Activities. This category is designed to rate the cultural or cultural-historical significance of the areas. The main focus in this category is on archaeological localities--clusters of archaeological sites--within the vehicle use areas and the degree to which they provide a typical or well-preserved example of a prehistoric culture, historic tribe, period of time, or category of human activity. Archaeological significance was also considered if the area included a vestige of some portion of a past cultural activity (e.g., a series of season exploitation sites or a single settlement) or a significant sample or pattern of cultural data.

(3) Presence of Unique Site(s) or Sample of a Fast Diminishing Archaeological Phenomenon. Rating in this category considers individual archaeological sites that are unique in one or more of the following categories:

(a) State of preservation.

(b) Types of cultural items or cultural features present.

(c) Site size.

(d) Unusual site situation or context.

(e) Potential for providing significant knowledge not likely to be duplicated elsewhere.

(f) Physical and ecological context of the site's archaeological resources.

Fast diminishing archaeological phenomenon includes sites, features or localities that are limited in number and that are extremely fragile (e.g. intaglios and trail complexes).

(4) Degree of Knowledge of the Area's Archaeological Resources. Although archaeological work has been carried out in the California Desert for at least the past 40 years, our knowledge of the archaeological resources of this vast area is still limited. Much more work is needed before our knowledge of the archaeology of any large area in the desert can be considered high. The rating for this category reflects the need for more research.

(5) Potential for Archaeological Resources Occurring. This rating assesses the probability of finding archaeological resources. The rating is based on the present knowledge of the archaeological resources in the areas as well as what is known about the surrounding area and similar areas.

(6) Potential for Long-Range Archaeological Research. Rating for this category is determined by the degree in which the archaeological resources are adequate for extensive research. This research may include specific problems on cultural adaptation or cultural change to general problems on the area's prehistory.

(7) Degree to Which Archaeological Resources Have Already Been Impacted. This category rates the condition of the archaeological resources at the time of the rating. This rating could have a noticable effect on the general rating for the areas.

(8) Present Impact on the Archaeological Resources. This category is designed to rate the present impact, both direct and indirect, on archaeological resources by RV activities. It can give some indication of the susceptibility of the resources to RV damage and the need for protective measures.

b. Impacts. The rating of archaeological resources assumes an idealized projection of impacts. The real impact can only be assessed after the various designations have been put into effect. Also, since archaeological resources are limited, fragile, and non-renewable, and since disturbance of them results in irreversible and commulative impact, if there was any question of which rating to use for a particular use-area, then a higher rating was chosen.

(1) Closed -

This designation could conceivably provide protection and long-term preservation for archaeological resources. The preservation of the natural environment of the protected archaeological resources could also be maintained. Such a designation could inadvertently increase loss of these non-renewable resources by drawing attention to their archaeological value.

(2) Open -

The designation of "open" would have the greatest impact on archaeological resources and would not be a viable alternative in areas where significant archaeological values exist or

where they can be predicted to exist. Applied to areas where information on the archaeological resources is lacking, this category could result in the uncontrolled loss of archaeological resources. Use of this category will result to some degree or another, in the irreversible and irretrievable commitment of archaeological resources.

(3) Designated Roads and Trails -

Next to closed, this designation could, if used properly, function best at limiting or avoiding impact on archaeological resources while, at the same time, function to keep RV activities out of such areas. The rating on the Analysis Summary sheet is based on the assumption that the designated roads and trails will not cross archaeological sites.

(4) Existing Roads and Trails -

In most cases, this designation would function only to minimize existing impact and to deter future impact on archaeological resources. Where existing roads and trails presently impact archaeological sites, this designation would help to increase that impact. Also this alternative would continue to allow impact in areas high in archaeological value where indirect impact could cause irrevocable loss to these non-renewable resources.

Archaeological Resources

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		N	?	L	H
5	Darwin Falls		N	?	N	?
10	Tortoise Preserve		N	L	L	M?
17	Amargosa Canyon		N	M	L	H
22	Clark Mountain		N	L	N	M
24	Kelso Dunes		N	M?	L	H?
31	Bigelow Cholla		N	N	N	L
33	Whipple Mountains		N	L	L	H
34	Turtle Mountains Interior		N	M	L	H
43	Desert Lily		N	M	L	H
51	O ocopia Mountains		N	?	L	M
53	Mecca Hills Interior		N	M	L	M
54	Salt Creek		N	M	L	M
57	San Sebastian Marsh		N	M	L	H
63	Crucifixion Thorn		N	L	N	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	M	L	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	N	?	?
8	Dove Springs		M?	N	L	N
11	Rand Mountains/Spangler Hills	Open	M	N	?	?
18	Dumont Dunes N.W.		?	N	?	?
30	Upper Johnson Valley	Open	L	N	N	L
37	Cadiz Valley/Danby Lake	BLM	M?	N	L	L
45	Ford Dry Lake	BLM	H?	N	?	L
46	McCoy Valley		M	N	L	N
47	Little Chuckwalla Mountains		M	N	?	?
49	Chiriaco Summit		L	N	L	N
60	Plaster City	BLM	M?	N	?	L
65	Mammoth Wash		?	N	?	?
68	Glamis/Imperial Sand Dunes (South)	BLM	L?	N	L	N
70	Buttercup Valley		M	N	M	L

Archaeological Resources

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		L	H	H	N
6	Walker Pass/El Paso		L?	H	H	N
7	Lone Tree Canyon		L	?	H	N
12	Randsburg/Johannesburg		L	?	M?	N
13	Trona Pinnacles		N	L	M?	N
16	Calico/Coyote Lake		L?	H	H	N
20	Kingston Mountains		L	M	H	N
23	Eastern Mojave		L	M	H	N
35	Turtle Mountains Perimeter		L	M?	H	N
36	Old Woman Mountains		L	M	H	N
39	East Morongo		L	L	H	N
40	Whitewater		L	L	H	N
41	Bighorn		L	M	H	N
42	Grapevine		L	M	H	N
48	Big Chuckwalla Mountains		L	?	H?	N
50	Orocopia Foothills		L	?	H?	N
55	Santa Rosa Mountains		L	M	H	N
59	Coyote Mountain		L	M	H	N
61	Yuha Basin		L	M	H	N
71	Picacho		L	?	H	N

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	M?	L	M	N
15	Fremont Peak	BLM	M	L	H	N
--	All national resource land not otherwise designated		M	L	H	N

Archaeological Resources

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		M	L	H	N
9	Jawbone Canyon		?	?	?	N
19	Dumont Dunes		M	L	M	N
21	Ivanpah Valley	BLM	?	L	H	N
25	Mojave Basin	BLM	?	L	H	N
26	El Mirage Lake		L	N	L	N
27	Shadow Mountains	BLM	?	L	M?	N
28	Kramer Hills/Iron Mountain	BLM	L	N	L	N
29	Stoddard Valley	BLM	L	N	L	N
32	Needles	BLM	L	M	H	N
38	Dale District		L	N	M?	N
44	Palen Dry Lake	BLM	M	L	H?	N
52	Mecca Foothills		M	L	M	N
56	San Felipe/Superstition Hills	BLM	?	L	H	N
58	Navy Lease	BLM	?	L	M	N
62	Davies Valley		M	L	H	N
64	Pinto Wash	BLM	?	L	M?	N
67	East Mesa	BLM	M	L	H	N
69	Plank Road		?	?	?	N

12. Paleontological Resources.

a. Rating Considerations. Each use-area was assessed for paleontological values using the following criteria:

(1) Density and Abundance of Paleontological Localities. This category reflects a relative rating for the density and abundance of the paleontological resources within a use area. Geological maps and literature were utilized to determine a rating. Where time allowed, experts on the paleontology of specific areas were consulted.

(2) Degree to Which Paleontological Resources Represent Best Extent or Only Surviving Vestiges of Some Prehistoric Eco-system. The emphasis in this category is on the degree to which the paleontological remains contain a representative sample of the various components of some ancient eco-system and not just the particular fossilized remnants or a specific life-form that is unique.

(3) Presence of Unique Site(s) or Sample of Fast Diminishing Paleontological Phenomenon. Rating in this category considers individual finds that are unique or rare.

(4) Degree of Knowledge of Area's Paleontological Resources. Based on existing information, the rating for this category gives a good indication of the need for future research.

(5) Potential for Paleontological Resources Occurring. This category is intended to more clearly evaluate the need for future research within specific use-areas. The rating is based on the present knowledge of the paleontological resources and geological formations in the use-area and the surrounding areas.

(6) Potential for Long-Range Archaeological Research. The rating reflects the degree to which the paleontological resources are adequate for extensive research.

(7) Degree to Which Paleontological Resources Have Already Been Impacted. This category rates the condition in which the paleontological resource existed at the time of the rating. If the area has been heavily impacted, this effects the general rating for the use-area.

(8) Present Impact on Paleontological Resources. This category is designed to rate the present impact, both direct and indirect, on paleontological resources by RV activities.

(9) Susceptibility to RV Impact. Paleontological resources may be abundant within a particular use-area but due to the nature of the formation in which they occur or to the location in which they are found, RV activities may be a minor threat. This category assesses the susceptibility of fossil localities to direct or indirect impact by RVs.

b. Impacts.

(1) Closed - Long-term preservation and protection of important paleontological resources could be afforded under this designation. If designations are enforced, RV impact would be of no concern.

(2) Open - In areas of high value paleontological resources, this designation would have the greatest impact. In such areas it will result in the irreversible and irretrievable commitment of paleontological resources.

(3) Designated Roads and Trails - If utilized properly, this designation could function to limit or avoid impact on paleontological resources. This is assuming that the roads and trails are not designated directly across fossil localities or through paleontological areas vulnerable to RV impact.

(4) Existing Roads and Trails - This designation would function to somewhat deter new direct impact on paleontological resources but would do little to minimize indirect impact. In areas of important paleontological value, this designation would continue to allow indirect impact to non-renewable resources.

Paleontological Resources

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		N	M	L	H
5	Darwin Falls		N	?	?	?
10	Tortoise Preserve		N	?	?	?
17	Amargosa Canyon		N	H	L	H
22	Clark Mountain		N	N	N	L
24	Kelso Dunes		N	L	N	L
31	Bigelow Cholla		N	N	N	L
33	Whipple Mountains		N	?	?	M?
34	Turtle Mountains Interior		N	?	N	M?
43	Desert Lily		N	?	N	M
51	Orocopia Mountains		N	?	L	H
53	Mecca Hills Interior		N	H	L	H
54	Salt Creek		N	?	?	?
57	San Sebastian Marsh		N	?	?	?
63	Crucifixion Thorn		N	?	?	?
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	L	N	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			OPEN	CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	H	N	M	L
8	Dove Springs		H	N	H	L
11	Rand Mountains/Spangler Hills	Open	M	N	?	L
18	Dumont Dunes N.W.		M?	N	M	L
30	Upper Johnson Valley	Open	L	N	L	N
37	Cadiz Valley/Danby Lake	BLM	L?	N	L	N
45	Ford Dry Lake	BLM	?	N	?	?
46	McCoy Valley		?	N	?	N
47	Little Chuckwalla Mountains		?	N	?	?
49	Chiriaco Summit		L	[illegible]	L	N
60	Plaster City	BLM	?	N	?	?
65	Mammoth Wash		?	N	?	?
68	Glamis/Imperial Sand Dunes (South)	BLM	?	N	?	N
70	Buttercup Valley		?	N	?	N

Paleontological Resources

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	OPEN	CLOSED
3	Saline-Panamint		?	?	?	N
6	Walker Pass/El Paso		L	H	H	N
7	Lone Tree Canyon		?	?	?	N
12	Randsburg/Johannesburg		N	L	L	N
13	Trona Pinnacles		L	M?	M?	N
16	Calico/Coyote Lake		L	H	H	N
20	Kingston Mountains		L	L	H	N
23	Eastern Mojave		L	L	H	N
35	Turtle Mountains Perimeter		?	?	L	N
36	Old Woman Mountains		L	?	H?	N
39	East Morongo		N	?	?	N
40	Whitewater		N	?	?	N
41	Bighorn		N	?	?	N
42	Grapevine		N	?	?	N
48	Big Chuckwalla Mountains		?	?	M?	N
50	Orocopia Foothills		?	?	?N	
55	Santa Rosa Mountains		N	L	L?	N
59	Coyote Mountain		L	H	H	N
61	Yuha Basin		L	M?	H	N
71	Picacho		?	?	H	N

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
14	Red Mountain/Cuddeback	BLM	?	?	?	N
15	Fremont Peak	BLM	?	?	?	N
--	All national resource land not					
	otherwise designated		M	L	H	N

Paleontological Resources

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		L	M	?	N
9	Jawbone Canyon		H?	L	H?	N
19	Dumont Dunes		?	L	H?	N
21	Ivanpah Valley	BLM	?	?	?	N
25	Mojave Basin	BLM	?	?	?	N
26	El Mirage Lake		L	N	L?	N
27	Shadow Mountains	BLM	L	N	L?	N
28	Kramer Hills/Iron Mountain	BLM	L	N	L?	N
29	Stoddard Valley	BLM	L	N	L	N
32	Needles	BLM	L	N	H?	N
38	Dale District		?	L	M?	N
44	Palen Dry Lake	BLM	L	L	H?	N
52	Mecca Foothills		?	L	?	N
56	San Felipe/Superstition Hills	BLM	?	L	H?	N
58	Navy Lease	BLM	?	?	L	N
62	Davies Valley		?	N	L?	N
64	Pinto Wash	BLM	?	N	M?	N
67	East Mesa	BLM	L	N	L	N
69	Plank Road		?	N	?	N

13. Impacts on Historical Sites and Features.

a. Closed. No vehicle destruction would occur.

b. Open. At present destruction to historic sites as mining camps, trails, tramways and abandoned railroads is caused by over exposure. Weekend trophy hunters and campers stock their bonfires with wooden remains and wearing away evidence of old wagon tracks by heavy vehicle use. The only solution would be closure of the site, and frequent patrolling by desert rangers.

c. Existing Roads and Trails. Most historic sites are located along routes which have historically been in use. "Existing roads and trails" therefore will provide no additional protection.

d. Designated Roads and Trails. This designation well might protect historic sites if the "designation" considers routing certain roads or road segments around them.

e. In general the RV designations will impact historic sites as follows:

Highest Level Impact	- Open
	- Restricted to Existing Roads and Trails
Lowest Level Impact	- Restricted to Designated Roads and Trails
	- Closed

History

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		?	?	?	?
5	Darwin Falls		L	L	L	L
10	Tortoise Preserve		L	L	L	L
17	Amargosa Canyon		L	H	H	H
22	Clark Mountain		L	L	L	L
24	Kelso Dunes		L	L	L	L
31	Bigelow Cholla		L	L	L	L
33	Whipple Mountains		L	L	L	L
34	Turtle Mountains Interior		L	L	L	L
43	Desert Lily		L	L	L	L
51	Orocopia Mountains		L	L	L	L
53	Mecca Hills Interior		L	L	L	L
54	Salt Creek		L	L	L	L
57	San Sebastian Marsh		?	?	?	?
63	Crucifixion Thorn		L	L	L	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	L	L	L	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	?	?	?	?
8	Dove Springs		L	L	L	L
11	Rand Mountains/Spangler Hills	Open	L	L	L	L
18	Dumont Dunes N.W.		L	L	L	L
30	Upper Johnson Valley	Open	L	L	L	L
37	Cadiz Valley/Danby Lake	BLM	?	?	?	?
45	Ford Dry Lake	BLM	?	?	?	?
46	McCoy Valley		L	L	L	L
47	Little Chuckwalla Mountains		L	L	L	L
49	Chiriaco Summit		L	L	L	L
60	Plaster City	BLM	L	L	L	L
65	Mammoth Wash		?	?	?	?
68	Glamis/Imperial Sand Dunes (South)	BLM	L	L	L	L
70	Buttercup Valley		M	L	L	L

History

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		L	H	H	L
6	Walker Pass/El Paso		L	H	H	L
7	Lone Tree Canyon		?	?	?	?
12	Randsburg/Johannesburg		L	M	M	L
13	Trona Pinnacles		L	L	L	L
16	Calico/Coyote Lake		L	H	H	L
20	Kingston Mountains		?	?	?	?
23	Eastern Mojave		L	H	H	L
35	Turtle Mountains Perimeter		?	?	?	?
36	Old Woman Mountains		L	M	M	L
39	East Morongo		L	L	L	L
40	Whitewater		L	L	L	L
41	Bighorn		L	L	L	L
42	Grapevine		L	L	L	L
48	Big Chuckwalla Mountains		L	L	L	L
50	Orocopia Foothills		L	L	L	L
55	Santa Rosa Mountains		L	L	L	L
59	Coyote Mountain		?	?	?	?
61	Yuha Basin		L	H	H	L
71	Picacho		L	H	H	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	?	?	?	?
15	Fremont Peak	BLM	?	?	?	?
--	All national resource land not otherwise designated		M	L	M	L

History

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		L	L	L	L
9	Jawbone Canyon		?	L	H	L
19	Dumont Dunes		L	L	H	L
21	Ivanpah Valley	BLM	L	L	L	L
25	Mojave Basin	BLM	L	L	H	L
26	El Mirage Lake		L	L	L	L
27	Shadow Mountains	BLM	L	L	L	L
28	Kramer Hills/Iron Mountain	BLM	L	L	L	L
29	Stoddard Valley	BLM	L	L	L	L
32	Needles		L	L	L	L
38	Dale District		L	L	H	L
44	Palen Dry Lake	BLM	?	?	?	?
52	Mecca Foothills		L	L	L	L
56	San Felipe/Superstition Hills	BLM	L	L	?	L
58	Navy Lease	BLM	L	L	L	L
62	Davies Valley		?	?	?	L
64	Pinto Wash	BLM	L	L	L	L
67	East Mesa	BLM	L	L	L	L
69	Plank Road		L	L	H	L

14. Recreation Uses.

a. Rating. The recreation vehicle plays a very important role in outdoor recreation on the California Desert. Nearly 70 percent of all recreational visits these days involve an off-road vehicle in some way.

Though the off-road vehicle is important, its use does conflict with the recreational pursuits of others. Conflicts are of two types, the presence of the vehicle and its impact in solitude etc., and possible damage to resource values which attract all recreationists.

Vehicles can impact the quality of experience a recreationist can expect from specific areas. For instance, the effect of numerous recreation vehicles used off of the road in a collecting area would be far different than if the same vehicles were in an area where non-RV recreations were seeking a primitive experience.

To assess the impact of recreational vehicles on non-RV recreationists, the impact of recreation vehicles on other recreation experiences and the resources offering the opportunity for the recreational experience must be considered. Figure 36 analyses the potential impact of recreational vehicles on key factors which comprise, in part, the recreational experience. Only those factors potentially impacted as a result of each alternative are analyzed. Scenic quality is considered elsewhere.

b. Impacts.

Closed - The closed designation will effect other recreation users who depend on the recreation vehicle. Where vehicle access is not needed, the closed designations will not impact other recreational uses. The long term impact might be to improve the quality of those recreation experiences associated with certain kinds of environmental appreciation.

Open - Where other recreation uses are dependent on the RV, the open designation should improve the experience. Increased environmental damage and loss of solitude would adversely effect environmentally oriented activities.

DR&T and ER&T - The vehicle is used by most desert recreationists as a means of access. Once at the selected destination, most recreationists leave their vehicle behind to enjoy their particular choice of recreation activity. Most land and activity oriented RV recreationists would find their experience degraded by uncontrolled vehicle use. Designated or existing roads or trails should have limited impact on the majority of recreationists.

KEY FACTORS

RECREATION ACTIVITIES IMPACTED	OPEN					CLOSED					EXISTING ROADS & TRAILS					DESIGNATED ROADS & TRAILS				
	HUNTING	SIGHTSEEING*	PRIMITIVE VALUES**	COLLECTING	CAMPING & PICNICKING	HUNTING	SIGHTSEEING*	PRIMITIVE VALUES**	COLLECTING	CAMPING & PICNICKING	HUNTING	SIGHTSEEING*	PRIMITIVE VALUES**	COLLECTING	CAMPING & PICNICKING	HUNTING	SIGHTSEEING*	PRIMITIVE VALUES**	COLLECTING	CAMPING & PICNICKING
ACCESS	+	+	x	+	+	-	-	0	-	-	0	0	-	-	0	-	-	+	-	-
SPECIFIC ATTRACTION***	-	-	x	+	-	+	+	+	-	-	-	-	-	+	0	+	+	+	-	-
INTRUSIONS	-	-	x	-	-	+	+	+	0	+	+	+	-	0	+	+	+	+	0	+
VANDALISM	-	-	x	-	-	+	+	+	0	+	0	0	0	0	0	+	+	+	+	+
EXPLORATION	+	+	x	+	0	-	-	0	-	0	0	0	0	0	0	-	-	0	-	0
EASE OF OBSERVATION	+	+	x	+	0	-	-	0	-	0	0	0	0	-	0	-	-	0	-	0
SOLITUDE	-	0	x	0	-	+	0	+	0	+	+	0	-	0	+	+	0	+	0	+

*Sightseeing - Includes Archaeological, Botanical, Historical, Geological, and Zoological sightseeing.

**Primitive Values - Includes those resource values which enhance the "primitive experience" obtained from activities in wild, natural, and undeveloped lands in a setting essentially removed from the effects of civilization. Activities within these areas might include hiking, backpacking, photography or general sightseeing where no form of mechanized conveyance is used.

***Specific Attraction - This includes the specific attraction peculiar to the recreation activity. One example might be a rockhounding area to the collector, or the historic site to the historic sightseer.

Legend - Potential impact of each alternative action on relevant key factors pertinent to the recreation experience.

x = Potentially negate recreation experience of participants
+ = Improve recreational experience
- = Significantly lessen recreational experience
0 = No significant impact on recreational experience

Other Recreation Uses

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		H	L	M	H
5	Darwin Falls		L	H	M	H
10	Tortoise Preserve		L	H	M	H
17	Amargosa Canyon		L	M	M	H
22	Clark Mountain		M	L	L	M
24	Kelso Dunes		M	L	L	M
31	Bigelow Cholla		L	L	L	L
33	Whipple Mountains		M	L	L	L
34	Turtle Mountains Interior		M	L	M	H
43	Desert Lily		L	M	M	H
51	Orocopia Mountains		M	L	L	L
53	Mecca Hills Interior		L	L	L	L
54	Salt Creek		L	L	L	L
57	San Sebastian Marsh		M	L	L	L
63	Crucifixion Thorn		L	L	L	H
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	L	L	L	L

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	M	L	M
8	Dove Springs		M	M	L	M
11	Rand Mountains/Spangler Hills	Open	L	L	L	L
18	Dumont Dunes N.W.		M	L	L	L
30	Upper Johnson Valley	Open	L	M	L	M
37	Cadiz Valley/Danby Lake	BLM	L	L	L	L
45	Ford Dry Lake	BLM	L	L	L	L
46	McCoy Valley		M	M	L	L
47	Little Chuckwalla Mountains		M	M	L	L
49	Chiriaco Summit		L	M	L	L
60	Plaster City	BLM	L	L	L	L
65	Mammoth Wash		L	L	L	L
68	Glamis/Imperial Sand Dunes (South)	BLM	L	L	L	L
70	Buttercup Valley		L	L	L	L

Other Recreation Uses

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		M	L	L	M
6	Walker Pass/El Paso		M	L	H	M
7	Lone Tree Canyon		M	L	M	M
12	Randsburg/Johannesburg		M	L	L	M
13	Trona Pinnacles		L	L	M	L
16	Calico/Coyote Lake		L	L	H	M
20	Kingston Mountains		L	L	L	M
23	Eastern Mojave		L	L	M	M
35	Turtle Mountains Perimeter		M	L	L	H
36	Old Woman Mountains		M	L	L	H
39	East Morongo		M	L	H	M
40	Whitewater		M	L	M	M
41	Bighorn		M	L	M	H
42	Grapevine		M	L	L	M
48	Big Chuckwalla Mountains		M	L	L	M
50	Orocopia Foothills		M	L	L	M
55	Santa Rosa Mountains		M	L	L	M
59	Coyote Mountain		M	L	M	M
61	Yuha Basin		M	L	M	L
71	Picacho		M	L	L	M

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	L	M	L	M
15	Fremont Peak	BLM	L	L	L	L
--	All national resource land not otherwise designated					

			PLAN RATING	ALTERNATIVE RATINGS		
Other Recreation Uses						
AREA NO.	AREA NAME	SPEC. NOTES	EXISTING ROADS & TRAILS (Special Design)	DESIGNATED ROADS & TRAILS	OPEN	CLOSED
1	Eureka Dunes		M	M	L	L
9	Jawbone Canyon		L	L	M	L
[illegible]9	Dumont Dunes		L	L	M	M
21	Ivanpah Valley	BLM	L	L	L	M
25	Mojave Basin	BLM	L	L	L	L
26	El Mirage Lake		L	L	H	H
27	Shadow Mountains	BLM	M	M	M	M
28	Kramer Hills/Iron Mountain	BLM	L	L	L	L
29	Stoddard Valley	BLM	L	L	M	L
32	Needles	BLM	L	L	L	L
38	Dale District		L	M	L	H
44	Palen Dry Lake	BLM	L	L	L	L
52	Mecca Foothills		L	L	L	L
56	San Felipe/Superstition Hills	BLM	L	M	M	M
58	Navy Lease	BLM	L	L	L	L
62	Davies Valley		L	M	M	M
64	Pinto Wash	BLM	L	L	M	M
67	East Mesa	BLM	L	L	L	M
69	Plank Road		L	L	H	L

15. <u>RV Experiences</u>

a. Rating by RV orientation types and attraction factors. A formula was used to calculate the relative impact of vehicle use designations on RV orientation types and attraction factors. The numerical representation of relative impacts was only used to guarantee internal rating consistency. The numbers are not intended to be a statistically valid representation of RV recreationists interests.

The formula is most easily understood by following an example. An example of the calculating of RV experience impact scores for "Vehicle RV orientation "in an" open" vehicle use designation follows:

(1) Step 1, each area was subjectively rated as high (3), medium (2), or low (1) value for each attraction factor. (The attraction factors are defined in Figure 32).

VEHICLE	Impact Rating (Step 1)	Importance Ranking Weight (See Figure 33)	Final Score (Step 2)
1. Size of area where ORV can be used.	2	3	6
2. Opportunity to test vehicle performance against another vehicle.	2	3	6
3. Good opportunity to travel cross-country without trails.	1	2	2
4. Number and degree of restrictions within area.	1	2	2
5. Area rugged with challenging terrain features.	3	2	6
6. Scenic appeal of area.	3	1	3
7. Travel distance to area.	1	1	1
8. Existence of roads and trails.	3	1	3
Total Impact Score			29

(2) Step 2, multiply the subjective impact rating (step 1) times the importance ranking weight (from figure 33) to obtain the impact scores for each attraction factor. Then add these scores to obtain the total impact score.

(3) Step 3, compare the total impact score against other totals to the proper column in figure 31, to obtain a high, medium or low impact rating. In this example the total impact score of 29 rates a "medium" under the vehicle orientation column.

(4) Step 4, calculate relative impacts for each vehicle use area, vehicle use designation, and orientation type in the same procedure as in the example above.

Figure 31. RV Area Rating Scores* -

Calculated by totaling all the scores of attraction factors present times their relative weight.

	Vehicle Orientation	Activity Orientation	Land Orientation
High	36-48	35-45	58-75
Medium	25-35	24-34	41-57
Low	15-24	14-23	24-40

*Scores were determined by totaling maximum possible score (see specialized checklists, Appendix A) and arbitrarily dividing by 3 to determine the range within each vehicle use designation. The numbers are of value only to assure internal consistency.

Figure 32. Developing and Ranking R.V. Attraction Factors. "Attraction factors" were determined and listed in order of relative importance. They were used to determine the potential experience an RV recreationist might derive from visiting the area.

The attraction factors were evolved in discussions with RV clubs, associations and vehicle manufacturers and distributors as well as non-RV oriented groups, such as the Sierra Club, and Desert Beautiful. Officers within these groups were presented with the relevant questionnaire depicted in the appendix (Appendix   ) and asked to rate the "Area Attraction Factors" by relative importance. The results of over 5000 marketing research questionnaires, representing numerous studies by RV manufacturers and distributors, were utilized to represent the opinions of the non-organized RV recreationist. It should be noted that no attempt at statistically justifiable sampling techniques was made. Because of the difficulty in identifying and stratifying the R.V. population, the data collected relative to "Area Attraction Factors" represent subjective opinions and not objective fact. The derivation of each attraction factor is based on the definitions given in Figure 24.

Derivation of Attraction Factors

AREA ATTRACTION FACTORS	DEFINITION
1. AREA RUGGED WITH CHALLENGING TERRAIN FEATURES:	Consider steepness and length of slope. The most important consideration is the challenge offered the RV recreationist in negotiating the area. Recreationists consider any slope over 50-60% too steep. Minimum Standards: Slopes or trails easily negotiable by 2-wheel drive vehicle.
2. SCENIC APPEAL OF AREA:	For an area to be attractive to an RV recreationist, other than the strictly vehicle (competitive) oriented, the terrain must have vegetative cover and have elevation variations of at least 200 ft. Scenic appeal is very closely related to the desire of the RV recreationist to explore with his vehicle. The more topographic relief and vegetation within an area, the more condusive it is to exploration. Minimum Standards: Area must have vegetation cover other than low desert plants. Area must exhibit some landscape relief.
3. FEELING OF REMOTENESS:	The RV recreationist defines remoteness as an absence of evidence of human habitation and recent culture. A remote area is simply out of sight and sound of major state highways, well traveled roads, residences and communities. A popular and heavily used RV area may actually give the RV recreationist a feeling of remoteness. Stock tanks, abandoned mines, fences, ghost towns, etc. do not detract from and may actually contribute to this feeling of remoteness. Minimum Standards: Absence of sight or sound of a state or interstate highway or established community.

Figure 32 continued

4. NUMBER AND DEGREE OF RESTRICTIONS:

This factor relates to the number of actual barriers to freedom of movement of the RV through an area. This may refer to private lands, fences or restrictions based on management objectives.

Minimum Standards: No minimum standards could be identified for this factor.

5. SIZE OF AREA:

The California Association of 4-WD Clubs has identified three general types of areas, Urban, Rural and Back Country. The differentiation between these areas is based on relative proximity to population centers and size. The first two areas vary in size from 30 to 300 acres and would correspond very closely to motorcycle parks. The major activity within these areas is vehicle performance testing. The third type of area, referred to by the RV recreationist as "back country" would most likely be the type of area identified as BLM administered lands. When looking for a "back country" experience, the RV recreationist is generally looking for a "new" area to visit. Paradoxically, the RV recreationist tends to frequent the same area several times. When asked to explain this, the RV recreationist indicated that the larger the area and the greater the topographic relief, the more chance there is for him to visit a "new" place.

Minimum Standards: To qualify in size, an area must be 5000 acres with an elevation difference of at least 200 feet.

6. TRAVEL DISTANCE TO AREA:

RV recreationist response to this factor was in terms of time required to reach the area. Several relationships between average and acceptable travel time have been developed. In most cases the variables are vehicle or activity preference and available time.

Figure 32 continued

The RV recreationists willingness to travel is dependent on several variables; 1. Type of vehicle, 4-WD, Dune Buggy or Motorcycle, 2. Type of terrain most preferred, sand dunes etc., 3. Family involvement with the ORV activity, and 4. Orientation type.

Analysis of available data relating to the California recreationists determined that RV orientation type would be the most logical independent variable to use when determining the importance of travel distance when choosing an area. Analysis of the California State and Park Study of Dune Buggy and Motorcycle owners and a study by Dr. John Peine at the University of Arizona in Tucson, indicates that willingness to travel varies with vehicle type and the recreationists activity patterns. These two factors are most easily identified to RV Orientation types (Peine 1972). This can be more directly understood when considering the method of transportation used to get the RV to its intended use site. Only 12% of motorcycle and dune buggy owners use the vehicles own power to arrive at the use area. Most motorcyclists transport their vehicle to the use site by van or truck while 90% of the dune buggy owners sampled in the California State Park study transferred their vehicle to the use site by trailers. Nearly all 4-WD owners use their 4-WD vehicle to arrive at the use site.

7. GOOD OPPORTUNITY TO TRAVEL CROSS-COUNTRY WITHOUT TRAILS:

The off-road recreationist, especially the motorcyclist and dune buggy owner, has a definite desire to travel cross-country without a trail. The off-road recreationist measures an area's quality for cross-country travel by the amount of relatively unvegetated area available. He is specifically looking for sand dunes, washes and dry river beds for this activity.

Figure 32 continued

	Minimum Standards: Presence of landscape of a sizeable dry river bed, wash, or tract of land with little vegetation.
8. EXISTENCE OF ROADS AND TRAILS:	The larger the percentage of a specific area that is accessible by an existing road or trail the higher that area will rate with the RV recreationist. Minimum Standards: Sufficient trails available to allow vehicle access to all major portions of the land area.
9. EXISTENCE OF SPECIFIC ATTRACTIONS SUCH AS HISTORIC SITES, ETC.:	A specific attraction is viewed by the RV recreationist as simply a place to go. Recreationists enjoy driving to something: a natural waterfall, a stream, a grove of cottonwood trees, a ghost town, an abandoned mine, etc. The more specific attractions that can be identified within an area, the higher it should rate. Minimum Standards: At least one point of interest per area.
10. OPPORTUNITY TO TEST VEHICLE PERFORMANCE AGAINST ANOTHER VEHICLE:	This is especially significant when rating sand dune areas. The area must offer opportunity for hill climbs and sand drags. A hill suitable for hill climbs must be at least 150 yards long offering expanse enough for two vehicles to compete. Sand drags are usually for 100 yards where the terrain must be relatively level.
11. DEGREE OF DEVELOPMENT (existence of camp facilities, etc.):	The existence of facilities is of minor importance to the RV recreationist. Those facilities considered important by RV recreationists who desire development in an area are, in order of importance: (1) sanitary facilities, (2) drinking water, (3) parking area, (4) camping facilities, and (5) shade. Minimum Standards: None

Figure 32 continued

12. DEGREE OF EXISTING DAMAGE BECAUSE OF PREVIOUS MINING, GRAZING, OR VEHICULAR USE:	This factor is relevant only to activity oriented RV recreationists. In general, this factor considers tire tracks off of trails, vegetation damage due to RV and general esthetic detractions due to resource damage.

Figure 33

Weighted Area Attraction Factors by ORV Recreational Orientation Type (listed in order of importance).

ORV RECREATIONAL ORIENTATION TYPE

VEHICLE	Importance Ranking Weight
1. Size of area where ORV can be used.	3
2. Opportunity to test vehicle performance against another vehicle.	
3. Good opportunity to travel cross-country without trails.	2
4. Number and degree of restrictions within area.	
5. Area rugged with challenging terrain features.	
6. Scenic appeal of area.	1
7. Travel distance to area.	
8. Existence of roads and trails.	

ACTIVITY	Importance Ranking Weight
1. Existence of specific attractions such as historic sites, etc.	3
2. Existence of roads and trails.	
3. Travel distance to area.	2
4. Degree of existing damage because of previous mining, grazing, vehicular use.	
5. Degree of development (existence of camp facilities, etc.).	
6. Scenic appeal of area.	1
7. Feeling of remoteness.	

LAND	Importance Ranking Weight
1. Area rugged with challenging terrain features.	3
2. Scenic appeal of area.	
3. Feeling of remoteness.	
4. Number and degree of restrictions within area.	
5. Size of area where ORV can be used.	2
6. Travel distance to area.	
7. Good opportunity to travel cross-country without trails.	
8. Existence of roads and trails.	
9. Existence of specific attractions such as historic sites, etc.	1
10. Opportunity to test vehicle performance against another vehicle.	
11. Degree of development (existence of camp facilities, etc.).	
12. Degree of existing damage because of previous mining, grazing or vehicular use.	

b. Impacts.

(1) Closed - Under this designation the experience of RV use is precluded. Thus the impact here on the RV experience may be great. However most closed areas are small. Many of them are inaccessible because of physical barriers.

(2) Open - In "open" areas the full potential of RV activities may be realized. Essentially the ratings here are the same as those originally described in Key Resource, Figure 29.

RV overuse may be the worst impact on future RV use. One of the desired attraction factors to RV enthusiasts is the scenic quality and feeling of remoteness. Such experience quality are degraded when an area is heavily riddled with trails, sheet erosion, and general obliteration of vegetation. It is not known at what degree of damage RV enthusiasts will abandon a site. It is expected that certain RV enthusiasts will abandon an area at different times.

(3) Existing Roads and Trails and Designated Roads and Trails. The attraction factors (Figures 32 and 33) most obviously effected by the "Existing roads and trails" and "Designated roads and trails" areas are those concerned with ease of movement within an area. On a more subjective basis, scenic appeal and degree of existing damage and the more emotional factor of "feeling of remoteness" are also potentially impacted.

Recreation Vehicle
Vehicle Orientation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	OPEN	CLOSED
3	Saline-Panamint		L	L	L	N
6	Walker Pass/El Paso		M	M	H	N
7	Lone Tree Canyon		L	L	M	N
12	Randsburg/Johannesburg		L	L	L	N
13	Trona Pinnacles		L	L	M	N
16	Calico/Coyote Lake		L	M	H	N
20	Kingston Mountains		L	L	L	N
23	Eastern Mojave		M	M	H	N
35	Turtle Mountains Perimeter		L	L	M	N
36	Old Woman Mountains		M	M	H	N
39	East Morongo		L	L	M	N
40	Whitewater		L	L	M	N
41	Bighorn		L	L	M	N
42	Grapevine		L	L	M	N
48	Big Chuckwalla Mountains		L	M	H	N
50	Orocopia Foothills		L	M	M	N
55	Santa Rosa Mountains		L	L	M	N
59	Coyote Mountain		L	L	L	N
61	Yuha Basin		L	M	H	N
71	Picacho		L	M	H	N

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
14	Red Mountain/Cuddeback	BLM	M	M	H	N
15	Fremont Peak	BLM	M	M	H	N
--	All national resource land not otherwise designated		M	L	H	N

Recreational Vehicle
Vehicle Orientation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		N	L	L	L
5	Darwin Falls		N	L	L	L
10	Tortoise Preserve		N	L	L	M
17	Amargosa Canyon		N	L	L	M
22	Clark Mountain		N	L	L	M
24	Kelso Dunes		N	M	M	H
31	Bigelow Cholla		N	L	L	L
33	Whipple Mountains		N	L	L	M
34	Turtle Mountains Interior		N	L	L	M
43	Desert Lily		N	L	L	L
51	Orocopia Mountains		N	L	L	M
53	Mecca Hills Interior		N	L	L	L
54	Salt Creek		N	L	L	L
57	San Sebastian Marsh		N	L	L	M
63	Crucifixion Thorn		N	M	L	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	L	L	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	N	L	L
8	Dove Springs		H	N	M	M
11	Rand Mountains/Spangler Hills	Open	H	N	M	M
18	Dumont Dunes N.W.		H	N	L	L
30	Upper Johnson Valley	Open	M	N	L	L
37	Cadiz Valley/Danby Lake	BLM	H	N	M	M
45	Ford Dry Lake	BLM	H	N	M	L
46	McCoy Valley		H	N	L	L
47	Little Chuckwalla Mountains		M	N	L	L
49	Chiriaco Summit		M	N	L	L
60	Plaster City	BLM	H	N	L	L
65	Mammoth Wash		M	N	L	L
68	Glamis/Imperial Sand Dunes (South)	BLM	M	N	M	M
70	Buttercup Valley		H	N	M	L

Recreation Vehicle
Vehicle Orientation

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
1	Eureka Dunes		M	L	H	N
9	Jawbone Canyon		L	L	H	N
19	Dumont Dunes		M	M	H	N
21	Ivanpah Valley	BLM	L	L	M	N
25	Mojave Basin	BLM	M	M	H	N
26	El Mirage Lake		L	L	H	N
27	Shadow Mountains	BLM	M	L	H	N
28	Kramer Hills/Iron Mountain	BLM	M	L	H	N
29	Stoddard Valley	BLM	M	M	H	N
32	Needles	BLM	L	L	M	N
38	Dale District		M	L	M	N
44	Palen Dry Lake	BLM	M	M	H	N
52	Mecca Foothills		L	L	L	N
56	San Felipe/Superstition Hills	BLM	L	L	M	N
58	Navy Lease	BLM	M	M	H	N
62	Davies Valley		L	L	M	N
64	Pinto Wash	BLM	L	L	M	N
67	East Mesa	BLM	L	L	M	N
69	Plank Road		M	M	H	N

Recreational Vehicle Activity Orientation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS	OPEN
2	North Saline Valley		N	H	M	H
5	Darwin Falls		N	L	L	L
10	Tortoise Preserve		N	M	M	M
17	Amargosa Canyon		N	M	M	M
22	Clark Mountain		N	L	L	L
24	Kelso Dunes		N	M	M	M
31	Bigelow Cholla		N	M	L	M
33	Whipple Mountains		N	L	L	L
34	Turtle Mountains Interior		N	M	M	M
43	Desert Lily		N	L	L	L
51	Orocopia Mountains		N	M	L	M
53	Mecca Hills Interior		N	M	L	M
54	Salt Creek		N	L	L	L
57	San Sebastian Marsh		N	M	M	M
63	Crucifixion Thorn		N	L	L	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	L	L	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING	ALTERNATIVE RATINGS		
			OPEN	CLOSED	EXISTING ROADS & TRAILS	DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	N	M	M
8	Dove Springs		H	N	H	M
11	Rand Mountains/Spangler Hills	Open	H	N	H	H
18	Dumont Dunes N.W.		L	N	L	L
30	Upper Johnson Valley	Open	M	N	M	M
37	Cadiz Valley/Danby Lake	BLM	M	N	M	M
45	Ford Dry Lake	BLM	M	N	M	M
46	McCoy Valley		M	N	L	L
47	Little Chuckwalla Mountains		H	N	H	M
49	Chiriaco Summit		L	N	L	L
60	Plaster City	BLM	H	N	H	M
65	Mammoth Wash		M	N	M	M
68	Glamis/Imperial Sand Dunes (South)	BLM	H	N	M	L
70	Buttercup Valley		H	N	H	M

Recreational Vehicle
Activity Orientation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		M	M	H	N
6	Walker Pass/El Paso		M	H	H	N
7	Lone Tree Canyon		L	M	M	N
12	Randsburg/Johannesburg		L	L	L	N
13	Trona Pinnacles		M	M	M	N
16	Calico/Coyote Lake		M	H	H	N
20	Kingston Mountains		L	M	H	N
23	Eastern Mojave		M	H	H	N
35	Turtle Mountains Perimeter		M	H	M	N
36	Old Woman Mountains		H	M	H	N
39	East Morongo		M	M	M	N
40	Whitewater		M	M	M	N
41	Bighorn		M	M	M	N
42	Grapevine		M	H	M	N
48	Big Chuckwalla Mountains		M	H	H	N
50	Orocopia Foothills		M	M	M	N
55	Santa Rosa Mountains		M	M	M	N
59	Coyote Mountain		M	M	M	N
61	Yuha Basin		M	H	H	N
71	Picacho		M	H	H	N

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	M	M	M	N
15	Fremont Peak	BLM	H	M	M	N
--	All national resource land not otherwise designated		M	M	M	N

AREA NO.	Recreational Vehicle Activity Orientation AREA NAME	SPEC. NOTES	PLAN RATING EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS DESIGNATED ROADS & TRAILS	OPEN	CLOSED
1	Eureka Dunes		M	L	M	N
9	Jawbone Canyon		H	M	H	N
19	Dumont Dunes		M	M	M	N
21	Ivanpah Valley	BLM	L	L	L	N
25	Mojave Basin	BLM	M	M	M	N
26	El Mirage Lake		L	L	L	N
27	Shadow Mountains	BLM	M	M	M	N
28	Kramer Hills/Iron Mountain	BLM	M	M	M	N
29	Stoddard Valley	BLM	M	M	M	N
32	Needles	BLM	L	L	M	N
38	Dale District		M	M	M	N
44	Palen Dry Lake	BLM	M	M	M	N
52	Mecca Foothills		M	L	M	N
56	San Felipe/Superstition Hills	BLM	H	H	H	N
58	Navy Lease	BLM	H	M	H	N
62	Davies Valley		M	M	M	N
64	Pinto Wash	BLM	M	M	M	N
67	East Mesa	BLM	M	M	M	N
69	Plank Road		L	M	H	N

Recreational Vehicle Land Orientation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		N	M	L	M
5	Darwin Falls		N	L	L	L
10	Tortoise Preserve		N	M	M	M
17	Amargosa Canyon		N	M	L	M
22	Clark Mountain		N	M	M	L
24	Kelso Dunes		N	H	M	M
31	Bigelow Cholla		N	L	L	L
33	Whipple Mountains		N	M	M	L
34	Turtle Mountains Interior		N	M	M	L
43	Desert Lily		N	L	L	L
51	Orocopia Mountains		N	L	L	M
53	Mecca Hills Interior		N	M	L	M
54	Salt Creek		N	M	M	L
57	San Sebastian Marsh		N	L	L	L
63	Crucifixion Thorn		N	L	L	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	L	L	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	M	N	M	M
8	Dove Springs		H	N	H	M
11	Rand Mountains/Spangler Hills	Open	H	N	H	M
18	Dumont Dunes N.W.		H	N	M	L
30	Upper Johnson Valley	Open	M	N	M	L
37	Cadiz Valley/Danby Lake	BLM	H	N	H	M
45	Ford Dry Lake	BLM	H	N	M	M
46	McCoy Valley		M	N	L	L
47	Little Chuckwalla Mountains		M	N	M	L
49	Chiriaco Summit		L	N	L	L
60	Plaster City	BLM	M	N	M	L
65	Mammoth Wash		M	N	M	M
68	Glamis/Imperial Sand Dunes (South)	BLM	H	N	H	M
70	Buttercup Valley		H	N	M	M

Recreational Vehicle
Land Orientation

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
3	Saline-Panamint		L	M	M	N
6	Walker Pass/El Paso		M	H	H	N
7	Lone Tree Canyon		L	L	M	N
12	Randsburg/Johannesburg		L	L	L	N
13	Trona Pinnacles		L	M	M	N
16	Calico/Coyote Lake		M	H	H	N
20	Kingston Mountains		L	M	H	N
23	Eastern Mojave		M	M	M	N
35	Turtle Mountains Perimeter		M	M	H	N
36	Old Woman Mountains		M	H	H	N
39	East Morongo		M	M	M	N
40	Whitewater		L	M	M	N
41	Bighorn		M	M	H	N
42	Grapevine		M	M	H	N
48	Big Chuckwalla Mountains		H	H	H	N
50	Orocopia Foothills		M	M	M	N
55	Santa Rosa Mountains		L	M	M	N
59	Coyote Mountain		L	L	M	N
61	Yuha Basin		L	M	M	N
71	Picacho		M	H	H	N

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
14	Red Mountain/Cuddeback	BLM	H	M	H	N
15	Fremont Peak	BLM	M	L	M	N
--	All national resource land not otherwise designated		M	M	M	N

Recreational Vehicle Land Orientation

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN	ALTERNATIVE RATINGS: CLOSED
1	Eureka Dunes		M	L	M	N
9	Jawbone Canyon		H	M	H	N
19	Dumont Dunes		H	M	H	N
21	Ivanpah Valley	BLM	M	L	H	N
25	Mojave Basin	BLM	M	M	M	N
26	El Mirage Lake		L	L	L	N
27	Shadow Mountains	BLM	M	L	M	N
28	Kramer Hills/Iron Mountain	BLM	M	L	M	N
29	Stoddard Valley	BLM	M	L	M	N
32	Needles	BLM	M	L	H	N
38	Dale District		M	M	M	N
44	Palen Dry Lake	BLM	M	L	M	N
52	Mecca Foothills		M	L	M	N
56	San Felipe/Superstition Hills	BLM	H	M	H	N
58	Navy Lease	BLM	M	L	M	N
62	Davies Valley		M	L	M	N
64	Pinto Wash	BLM	M	L	M	N
67	East Mesa	BLM	M	L	M	N
69	Plank Road		M	M	H	N

16. Impacts on Resource Uses (Non-Recreational) On National Resource Lands.

Closed - Where closures lie within livestock grazing areas, plant damage will be stopped and forage production enhanced. Educational field trips may be curtailed to some degree. Research in natural settings will be enhanced, so long as the closures are not too large to walk into. The mining industry is not effected as it is legally exempted from following any vehicle use regulations. Home tracts are not effected.

Open - In grazing areas off-road vehicles can have two detrimental impacts, harassment of livestock and reduced forage production on heavily used sites. Quality of an area for educational and research purposes will be reduced by RV use. An open area, too near urban areas, might create noise and/or dust nuisance to residents.

Designated Roads and Trails - Adverse impacts can be minimized or eliminated by proper road designation. The widening of roads may cause a reduction in livestock forrage.

Existing Roads and Trails - This designation will do little to eliminate conflict with any of the existing resource uses. However, it will slow the increase in conflict which comes with open, cross country travel.

Nonrecreational Resource Use

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	OPEN	CLOSED
3	Saline-Panamint		N	L	L	L
6	Walker Pass/El Paso		L	L	H	N
7	Lone Tree Canyon		L	L	L	N
12	Randsburg/Johannesburg		N	L	L	N
13	Trona Pinnacles		N	L	L	N
16	Calico/Coyote Lake		N	L	M	M
20	Kingston Mountains		N	L	H	L
23	Eastern Mojave		N	L	H	H
35	Turtle Mountains Perimeter		N	L	L	N
36	Old Woman Mountains		N	L	L	L
39	East Morongo		N	L	M	L
40	Whitewater		N	L	M	L
41	Bighorn		N	L	M	H
42	Grapevine		N	L	M	H
48	Big Chuckwalla Mountains		N	L	M	M
50	Orocopia Foothills		N	L	L	N
55	Santa Rosa Mountains		N	L	H	H
59	Coyote Mountain		N	L	H	M
61	Yuha Basin		N	L	M	L
71	Picacho		N	L	L	M

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
14	Red Mountain/Cuddeback	BLM	L	N	L	L
15	Fremont Peak	BLM	L	N	L	L
	All national resource land not otherwise designated		L	L	L	H

Nonrecreational Resource Use

IMPACT RATING

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	ALTERNATIVE RATINGS: OPEN
2	North Saline Valley		N	L	N	L
5	Darwin Falls		N	L	L	L
10	Tortoise Preserve		N	L	L	H
17	Amargosa Canyon		N	N	N	M
22	Clark Mountain		N	N	N	L
24	Kelso Dunes		N	N	N	H
31	Bigelow Cholla		N	L	N	L
33	Whipple Mountains		N	L	N	L
34	Turtle Mountains Interior		N	L	N	L
43	Desert Lily		N	N	N	L
51	Orocopia Mountains		N	H	N	H
53	Mecca Hills Interior		N	L	N	L
54	Salt Creek		N	L	N	H
57	San Sebastian Marsh		N	L	N	H
63	Crucifixion Thorn		N	N	N	L
66	Glamis/Imperial Sand Dunes (North)	Op W/Cor	N	M	L	H

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: OPEN	ALTERNATIVE RATINGS: CLOSED	ALTERNATIVE RATINGS: EXISTING ROADS & TRAILS	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS
4	Olancha	BLM	L	L	L	N
8	Dove Springs		H	M	M	L
11	Rand Mountains/Spangler Hills	Open	L	L	L	N
18	Dumont Dunes N.W.		M	N	L	N
30	Upper Johnson Valley	Open	L	N	L	N
37	Cadiz Valley/Danby Lake	BLM	L	N	L	N
45	Ford Dry Lake	BLM	L	N	L	N
46	McCoy Valley		L	N	L	N
47	Little Chuckwalla Mountains		M	N	L	N
49	Chiriaco Summit		L	N	L	N
60	Plaster City	BLM	L	N	N	N
65	Mammoth Wash		L	N	L	N
68	Glamis/Imperial Sand Dunes (South)	BLM	L	N	L	N
70	Buttercup Valley		L	N	L	N

Nonrecreational Resource Use

AREA NO.	AREA NAME	SPEC. NOTES	PLAN RATING: EXISTING ROADS & TRAILS (Special Design)	ALTERNATIVE RATINGS: DESIGNATED ROADS & TRAILS	OPEN	CLOSED
1	Eureka Dunes		L	N	H	L
9	Jawbone Canyon		M	N	H	L
19	Dumont Dunes		L	N	M	N
21	Ivanpah Valley	BLM	L	N	L	N
25	Mojave Basin	BLM	L	N	L	N
26	El Mirage Lake		L	L	L	N
27	Shadow Mountains	BLM	L	N	L	N
28	Kramer Hills/Iron Mountain	BLM	L	N	L	N
29	Stoddard Valley	BLM	L	N	L	N
32	Needles	BLM	L	N	L	N
38	Dale District		L	N	L	N
44	Palen Dry Lake	BLM	L	N	L	N
52	Mecca Foothills		L	N	L	N
56	San Felipe/Superstition Hills	BLM	L	N	L	H
58	Navy Lease	BLM	L	N	L	L
62	Davies Valley		L	N	H	L
64	Pinto Wash	BLM	L	N	L	N
67	East Mesa	BLM	L	N	L	N
69	Plank Road		H	N	H	N

17. Desert Hazards. With all of its stark beauty, the desert can be harsh and inhospitable. The mute testimony of persons lost in intolerable heat, without water, is neither pleasant to contemplate nor to behold. Such cases do occur, however, through accident or ignorance as the uninitiated venture farther and farther into unfamiliar lands with a blind reliance on mechanized equipment.

Figure 37 represents a summary of recorded deaths and injuries in the California Desert. As indicated a total of 115 deaths and 1,270 serious injuries occurred in 1972. No weekend passes without a serious accident, even death, bringing a desert outing to a sudden, tragic end.

The major cause of serious injury and one of the major causes of death is the RV. Vehicles driven off road for fun demand the same care in operation as any highway vehicle. Often a usually careful driver abandons all caution once he strikes out cross country with a jeep, motorcycle or dune buggy.

Mines

Abandoned mines and open pits without posted warnings are common on the desert. What appears to be a harmless, level-floored opening in a hillside may conceal a shaft dropping straight down hundreds of feet.

Military Ordnance

Large areas in the desert were used for bombing ranges and maneuvers by the Armed Forces. Unexploded ordnance have been located in many sections of the desert.

Water

In 1972, 27 people drowned on the California Desert. In many cases these drownings were a result of flash floods. Lives are lost on the desert because of too much water as well as too little.

Wildlife

Rattlesnakes are probably the most common threat. The desert also has at least one species of poisonous scorpion. Both the brown recluse and black widow spiders are also found in certain areas.

As its name implies, the desert can be a desolate and forbidding environment. All recreational activities pose certain threats to the recreationist. Recreational activities occurring on the desert are further complicated by a potentially inhospitable environment.

Figure 37

Deaths and Serious Injuries in The California Desert *

1972

Cause	Imperial County		San Bernardino County		Riverside County		Line Totals	
	Deaths	Serious Injury	Deaths	Serious Injury	Deaths	Serious Injury	Deaths	Serious Injury
ORV Accident	2	327	8	682	2	46	12	1155
Mine Hazard	0	0	2	3	0	1	2	4
Criminal Assault	2	0	11	5	5	2	18	7
Falls (except mine hazards)	0	1	2	14	2	5	4	20
Gunshot (except criminal assault)	2	14	3	35	2	26	7	75
Snake bite	0	2	0	4	0	3	0	9
Heat/Dehydration	1	-	3	-	1	-	5	-
Drowning	5	-	14	-	8	-	27	-
Natural Causes	4	-	8	-	6	-	18	-
Body Found (cause unknown)	1	-	9	-	5	-	15	-
Other (explain) Aircraft	1	-	3	-	3	-	7	-
Column Totals	18	344	63	743	34	183	115	1270

* This count excludes accidents within towns & small communities in the desert area.

18. Impact on Highway System

a. Criteria. Evaluation of the impact if recreation vehicles on the highway system is based on an analysis of existing peak hour capacity on those segments of the system serving those areas where concentrations of RV use are likely to occur. The following figure 38 displays the analysis. In those instances where peak hour capacity approaches, equals or exceeds actual capacity the segment is given a rating of High (H). This means that the designation of the areas served by the segment may cause congestion on the segment during peak hours of the week probably Friday afternoon and Sunday evening.

b. Impacts Caused by Designations.

Closed & Designated Roads & Trails & Existing Roads and Trails. It is assumed that desert recreation traffic will not be greatly impacted by these designation. They are not likely to cause concentration of activity and attending conjestion.

Open and Competitive Areas. Designation of open and competitive areas will tend to cause the concentration of RV activity and possible conjestion of adjacent highways. These areas were evaluated to determine impacts on capacity of the highway system during peak hour travel. Figure 38 summarizes this evaluation. The following areas were found to have possible high impacts (cause conjestion) on the system:

(4) Olancha
(11) Rand Mt/Spangler Hills
(14) Red Mt/Cuddeback
(15) Freemont Peak
(26) El Mirage Lake
(27) Shadow Mt
(28) Kramer Hills/Iron Mt

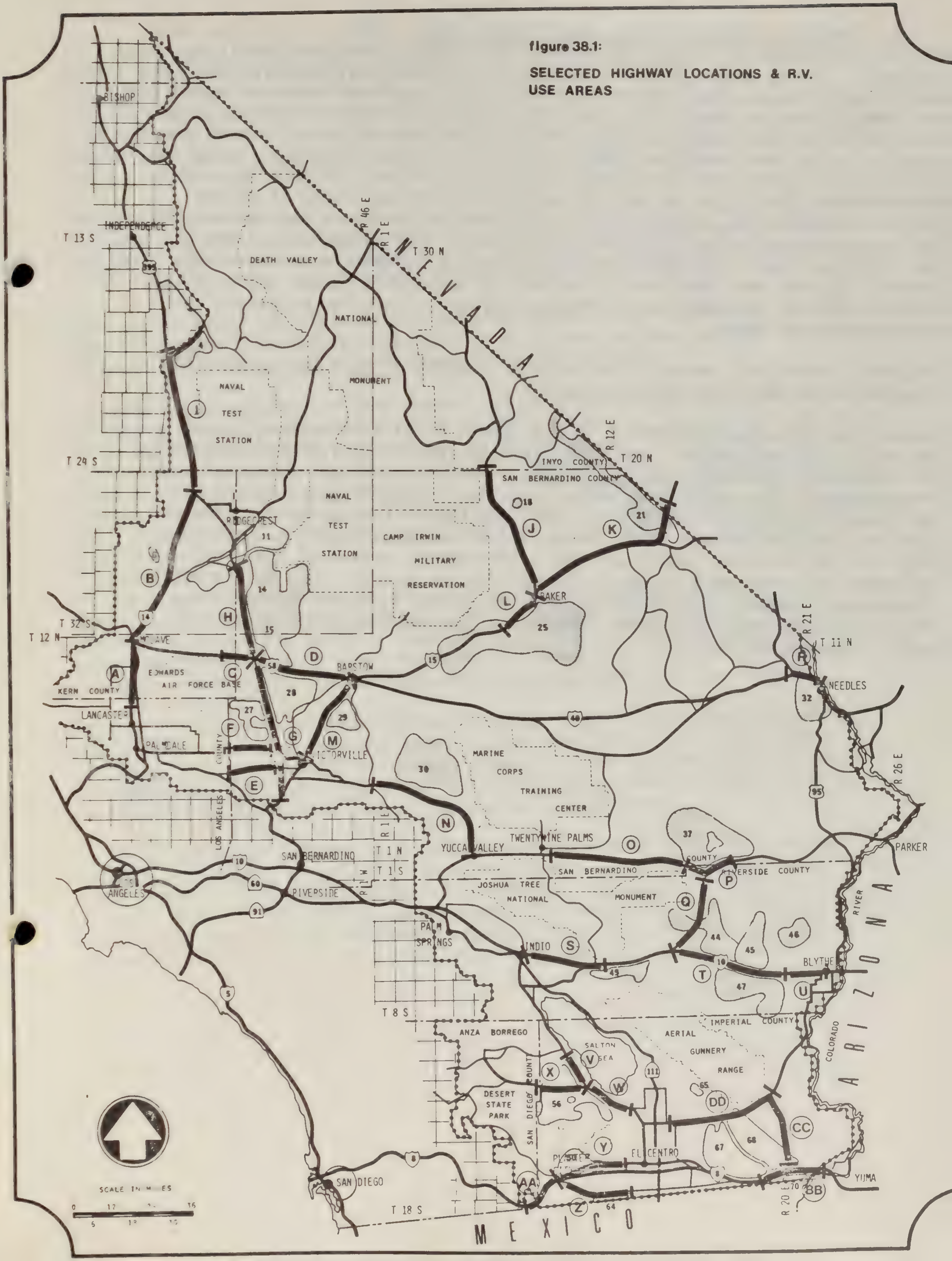
The impacts of recreation activity can to some extent be mitigated through management actions. The issuance of SLUP for organized events could incorporate an assessment of possible conjection in areas where a number of events are proposed.

FIGURE 38. RV IMPACT RATINGS ON HIGHWAY SYSTEM

Map Location	Highway Segment: Highway	Segment Miles	Service Volume Vehicles Per Hour	Peak Hour Volume (Current)	Potential Deficiency Impact Caused by RV	Open and Competitive Area Served
A	FW I 14	13	1800	500	Low	4, 8, 11
B	FW I 14	48	600	500	High	11
C	RT 58	6	700	740	High	14, 15, 27, 28
D	RT 58	29	670	500	Low	29, 25
E	RT 18	15	780	490	Low	27, 28
F	El Mirage Rd	12	Ample Capacity	-	Low	26, 27, 28
G	RT 395	43	710	653	High	26, 27, 28, 15, 14
H	RT 395	28	740	520	High	11, 14, 15
I	RT 395	49	600	680	High	4
J	RT 127	42	870	70	Low	18, 19
K	FW I 15	50	1800	1100	Low	18, 19, 21, 25
L	FW I 15	15	1900	1150	Low	18, 19, 21, 25
M	FW I 15	27	1800	1500	Medium	18, 19, 21, 25, 29
N	RT 247	45	630	230	Low	30
O	RT 62	45	650	260	Low	37
P	RT 62	11	390	120	Low	37
Q	Desert Center/ Rice	27	Ample Capacity		Low	37, 44
R	FW 40	5	2000	700	Low	45, 47, 49
S	FW I 10	24	1700	500	Low	45, 47, 49
T	FW I 10	45	1700	500	Low	45, 47, 49
U	FW I 10	7	1660	570	Low	46
V	RT 86	8	660	600	High	56, 57, 58
W	RT 86	22	620	520	Medium	56, 57, 58
X	RT 78	13	490	170	Low	56, 57
Y	RT 580	12	?	860	?	58, 60
Z	RT 98	23	900	53	Low	64
AA	FW I 8	12	1600	500	Low	58, 60, 64
BB	FW I 8	.15	1740	330	Low	67, 70
CC	Ogilby Rd	24	600	40	Low	65, 68
DD	RT 78	34	650	115	Low	65, 68

figure 38.1:

SELECTED HIGHWAY LOCATIONS & R.V. USE AREAS



19. Impacts on Adjacent Uses and Private Lands. About 3.5 million acres of the desert are in private ownership. This land is not necessarily contiguous. In most places private land forms a checkerboard pattern with BLM administered lands. Many desert residents have complained that the people who come to use the desert don't pay the taxes which support the emergency services which many times are required by out of town RV users. Local Governments cite the overloaded emergency facilities at local hospitals caused by injuries and deaths from large desert motorcycle races. In 1972 there were approximately 2000 injuries and 140 deaths from various forms of RV use. Desert residents also cite the additional expense of search and rescue. In 1971 rescue teams in the high desert reported 37,291 rescue miles traveled and 7,214 man hours were spent covering 47 races to administer aid to 533 serious injuries and there were 3 deaths. Also in 1971 rescue teams in the Yuha desert made 20 searches for missing persons. This rescue effort required 5,000 man hours.

Trespass, vandalism, noise, littering and creation of dust are among other impacts to residents and their property.

In addition to being concerned with the impact of RV's on private property and daily life many desert residents are also concerned with the degredation of the desert environment by RV activity. Four local desert conservation organizations, The California Garden Clubs Inc., Desert Empire District, The Desert Protective Council Inc., The High Desert Environmental Defense Fund Inc. and the Morongo Basin Conservation Association with a total membership of 1,000 are both supporters and constructive critics of BLM's efforts to manage off-road vehicle use in the California desert. Many desert residents, although not members of these organizations, support the efforts of these groups due to a perceived common interest - the management of recreation vehicles on desert lands.

20. Additional Impacts Expected If Plan Implementation Is Delayed. Over the past 5 years the rate of RV oriented recreation use has more than doubled. Increased resource damage has been only controlled by the preference of recreationists for certain areas. Under these conditions certain sites have been severely reduced in production capability by actual plant damage and soil compaction. This change in vegetation and soil characteristics has a subsequent reduction in wildlife productivity on the habitat level.

The program attempts to accommodate the present use and yet reduce impact on the more vulnerable habitats. To delay the plan implementation will allow continued deterioration of certain sites and delay recovery of sites which still have potential to revegetate and repopulate naturally.

Even in the event of a decrease of the popularity of RV recreation, deterioration of certain sites would continue. This is because the habitat is often an attractive feature which brings about its own destruction.

To delay implementation of the program until we understand fully all potential RV impacts on desert resources would be self-defeating. The longer the delay the more unregulated and unmonitored use takes place. By the time resource studies were completed the resource values could be last. Adequate resource studies take many years. For example, Dr. Fred Wagner, Dean of the School of Natural Resources, Utah State University, has said that it sometimes takes 15 years to adequately study and understand the life history of a single animal species.

If the total number of recreation vehicle visits remains constant, impacts on new areas may still be expected. Users tend to concentrate on areas that are easily accessible and near metropolitan areas. As these areas become increasingly crowded, many users move to less inhabited areas. This movement proceeds generally to the northern and eastern portions of the desert.

Delay of enforcement of the program by ranger patrols, and designating roads and trails, will have the same effect as leaving the RV use unregulated. In addition, partial implementation will result in leaving some areas vulnerable to continuing impacts. Full protection afforded by this program will only be realized with adequate levels of funding and manpower.

It is always possible that some unforeseen factor could actually decrease the numbers and effects of RV's on desert resources. A factor extreme enough to cause a significant reduction in the impacts in the immediate future is unlikely. But, if for instance gasoline prices doubled then many recreationists might spend less time in the desert, simply drive to areas that are nearer to the metropolitan regions or perhaps take vacations fewer times a year.

21. <u>Impact Potential of Different Types of Recreation Vehicles</u>. Many RV users have expressed the opinion that it is the other types of recreation vehicles that cause "all the problems." That is, if they drive dune buggies they point the finger at four-wheel drive vehicles and motorcycles. If they drive motorcycles, then they cast the blame on those "four-wheeled monsters."

No absolute determination has been made of the type of vehicle which causes the most impact. This determination is extremely complex. Numerous factors must be considered, including: speed of the vehicle, type of tires, size of wheels, number of tires, size of the engine, the torque transmitted through the wheels, the shearing effect of the tires on different degrees of slope, the direction of travel around the slope or up the slope, and many other factors. Some research has been done on the impact of recreation vehicles, specifically with the use of moon vehicles prior to landing on the lunar surface. Prior to landing on the moon and using vehicles there, NASA wanted to determine how deep the vehicles would sink into the dust.

Analysis of the specific types of impact of RV's on the environment is complicated by the number of uses to which these vehicles are put. Figure 40 shows some of the primary uses of recreation vehicles by vehicle types as well as defining what each vehicle use category includes.

Various questions relating to types of vehicle impacts can be raised. In terms of direct damage to plants, for instance, dune buggies do less damage than other RV types; because they are designed to run where vegetation is sparse to nonexistent. That is, they appear to do less direct physical damage. However, certain dune plants have seeds which require scarification before germination can occur. Would dune buggy traffic hasten scarification and enhance germination? Or would dune buggy traffic bury the seed to a depth that would not permit emergence of the seedlings? Also, what are the down wind effects of man's modification of the dune height, shape, and density by dune buggies? Because dune buggies also frequently run at night time with lights on, are nocturnal animals disturbed or damaged? The answer to all of these questions are little understood.

Four-wheel drive vehicles have the potential to do more damage than any other types of RV's because of their weight, width, and horsepower. However, because of the characteristics of the public that generally own and operate four-wheel drives, these vehicles apparently do little damage to plants and plant communities in a direct sense. Likewise, if they do not harm these habitats, the wildlife resource is also spared. These vehicles are normally used to transport a person to specific sites or areas along trails and roads. But, when used off roads and trails, these vehicles make deep ruts, knock down plant and compact soils. These impacts expose soils to wind and water erosion and change the soil microhabitat resulting in inhibition of revegetation and an overall lowered potential of the habitat to regenerate.

Motorcycles, because of their size and weight, have the least potential to do damage of any RV type. However, because of the use to which they are

put, the motorcycle does the most direct damage to vegetation and habitat of all RV types. The motorcycle is most often used to challenge terrain and to compete with other vehicles. In some races over 1000 motorcycles may impact a certain point within 1 hour. Again, the indirect impacts from soil compaction and increased erosion hazards are probably more significant than the direct damage to plants. When used as transportation only, these vehicles could be expected to do little measurable damage, either direct or indirect.

FIGURE 40 - TYPES OF RV'S AND SOME OF THEIR USES

		VEHICLE USES [2]																	
		COMPETITIVE USES											GENERAL USE OR "PLAY"						
		HILLCLIMB	DRAGS	COURSE RACE	RALLY	ENDURO	HARE & HOUND	SCRAMBLES	TRIALS	MOTORCROSS	HARE SCRAMBLES	POINT TO POINT	HILLCLIMB	SPEED RUNS	CLUB RUNS	VEHICLE TESTING	ON TRAIL TOURING	OFF TRAIL TOURING	PIT RACING
VEHICLE TYPE	DUNE BUGGY	X	X	X									X	X		X		X	
	4-WHEEL DRIVE	X		X	X										X	X	X	X	
	MOTORCYCLE	X				X	X	X	X	X	X	X	X			X	X	X	X

IV. MITIGATING MEASURES

The entire program is an attempt to reduce environmental impact of RV use. The program sets priorities of management on those vehicle use areas that are most fragile or those where greatest RV impact potential exists.

A. MITIGATION MEASURES EXPLICIT IN THE PROGRAM

Mitigation measures included in the program fall into five general topics. These are: (1) Orient vehicle use designations to resource values, (2) Designate levels of vehicle use, (3) Make user groups and individual desert users part of the planning process, (4) Cooperate with other land owners and non-BLM agencies, and (5) Special competitive vehicular event provisions.

Orienting vehicle use designations to resource boundaries helps to avoid direct and indirect impacts by vehicles. The main dilemma here is protecting all of the resources simultaneously. For example, a vegetation/wildlife habitat may not correspond with the boundaries of a "high" air pollution potential air basin. The attempt was made to avoid endorsing RV use on sensitive or vulnerable resources (Figure 29). The analysis shows in which areas resources are relatively resistant to vehicles. It also shows those areas that have been heavily disturbed, altered or destroyed in the past. It was in the latter areas that it is considered that RV's could cause the least additional damage. In all cases it was assumed that RV's would exert some impact on any area.

Control of the level of vehicle use will preserve not only the resource quality but also the value of various desert recreation experiences. The levels of use are described in the vehicle use designations. The open, closed, and existing roads and trails designations are most explicit. The designated roads and trails, the special design, RV corridors and competitive course design designations are less explicit. The latter designations simply state that the area will remain as "existing roads and trails" until such time as further studies determine either which roads should be closed or designated open, and which uses are consistent with high environmental quality in these areas. These latter two categories will require further public input as well as further environmental analysis prior to being implemented. Then, some of the mitigation measures not yet explicit in the plan, discussed in the next section, might be considered here.

Continuing dialogue between user groups and individuals is an integral part of the planning process that evolved the program. It is indeed a mitigating measure in the sense that the BLM staff has learned much about resource capacity as well as wishes and desires of the users. Likewise, the users have learned about the dilemma of reaching a compromise between conflicting uses with which BLM is faced. The extent of this dialogue with user groups and the general public is described further in Section VIII.

Consultation with other land owners and administrators was a critical part of the planning process. The "checkerboard" ownership pattern complicated the designation of certain areas for various levels of vehicle use and yet minimized trespass on private lands. Wherever possible areas were selected with the objective of providing buffer zones around specific parcels of other agencies' land in order to protect the values or activities within their boundaries.

Some environmental protection will be accomplished by limiting competitive racing to a system of race courses rather than permitting an infinite number of race courses. Seventeen race courses will be designed by BLM managers. These courses will be finalized after consultation with representatives of the organized groups and a thorough environmental reanalysis. These courses will generally follow previously popular courses. A thorough environmental analysis and field investigation will be conducted on each race course to supplement the environmental analysis which was done on an area-wide basis as a part of this program.

Two large areas were identified where competitive event sponsors are allowed to lay out their own courses. These areas include No. 30 - Upper Johnson Valley and No. 11 - Rand Mountains/Spangler Hills. The resources in these areas have already been riddled with trails. BLM will be responsible for completing an environmental analysis prior to issuing a race permit.

Long distance race courses have also been provided in this program. These are identified in a number of locations in the desert and generally provide for continuation of the major long distance race events which have been traditional during the past 5 years. The program, however, limits such long distance racing only to those existing courses identified on the program map and thus will prevent continued proliferation of more such courses throughout the desert and identifies locations where supplemental and more detailed infield environmental analysis and resource investigation will be conducted. Race sponsors will still be required to make application and follow Bureau procedures for environmental analysis prior to issuing of permits.

A special exception for enduro competitive events is provided in this program permitting such events in all areas of the desert except those areas identified as closed or designated roads and trails. This exception is given, recognizing that such competitive events by comparison to others, have minimum impact on environmental and resource values. Since the nature of the event is not a test of speed or a testing of a machine, rather it is a competition in which the participants attempt to come the closest to an established time between two points. The event is held utilizing existing roads and trails and street legal vehicles. Therefore, it is more in the nature of a tour rather than a race. In addition, there is no mass starting of competitors. By permitting such events tthroughout wide reaches of the desert, the Bureau hopes to meet a reasonable recreation need and at the same time encouraging competition enthusiasts to choose this kind of event rather than other kinds which are more environmentally destructive.

B. POTENTIAL MITIGATION MEASURES NOT EXPLICIT IN THE PLAN

Though many mitigating measures are not yet explicit they will be essential for ultimate success of the program. The mitigation measures discussed in the previous section, provide the overview and philosophies upon which to build. Specific detail of implementing the program and managing the resources must be systematically considered before the program objectives can be realized.

Intensive management may make some impact ratings invalid. For example, in one area the potential RV impact on wildlife values may be rated high. The primary impact might result from driving vehicles too close to a spring and by so doing destroying wildlife habitat. Because the impact rating was high perhaps a "closed" vehicle use designation was chosen for the area. If the area was intensively managed, including signs, patrol, interpretive displays, well-defined paths and trails, then most of the area surrounding the spring, except for that area immediately in the vicinity, could be reclassified as "open." The result would be that visitors would regain some of the freedom lost with the earlier designation, yet the resources would be protected. Obviously, the latter approach would require greater manpower and funding than is presently available.

Seven categories of potential mitigating measures are briefly described in the remainder of this section. Each category will, no doubt, be described in much greater detail as supplemental environmental analysis records are written in the future.

1. Define Acceptable Vehicle Uses. This section lists use regulations that are more specific than the vehicle use designations of the plan. Included here may be things over which BLM has little control. For instance, legislation requiring recreational vehicles to have adequate mufflers and to control hydrocarbon emissions may be needed. Some laws already exist that require implicitly or explicitly a protection for certain resources from a variety of impacts. For example, archeological resources are protected by: (a) The Antiquities Act of 1906 (Public Law of 59-209; 34 Stat. 225), (b) The Historic Sites Act of 1935 (Public Law 74-292; 49 Stat. 666), (c) The National Historic Preservation Act of 1966 (Public Law 89-665; 80 Stat. 915), and (d) Executive Order 11593, "Protection and Enhancement of the Cultural Environment," May 13, 1971 (36 FR 8921, May 15, 1971).

It may be desirable in the future to control vehicles other than recreational vehicles. As has already been noted, miners' vehicles are specifically exempted from this plan because of interpretation of other federal statutes. They may, however, exert the same sort of impact on the

land as recreational vehicles. Therefore, mitigation measures for such potential impacts should be formulated.

Time restrictions might also be added to the land restrictions. The vehicle use designations do not specify time of use. They imply that use may occur at any time - day or night. It may be desirable to restrict vehicles away from some areas during the nighttime. Wildlife activity during the evening and night would be vulnerable to direct impact. This may be especially true in the sand dune areas. In some desert areas vehicle use should be restricted to a certain season of the year. Certain wildlife, for instance, may be potentially disturbed more during nesting or mating season by vehicles than during other times of the year. One additional time restriction might relate to the potential vehicle carrying capacity of an area. After an analytically determined amount of vehicles use in a particular area, the area would be "closed" to provide a resting period for natural restoration.

Vehicle speeds, as well as manner of operation, might be regulated. Perhaps the RV direction of travel on certain soils would be around a hill and on other soils would be allowed up and down the hill; or on the flats higher speeds would be allowed than for speeds climbing hills. The speeds and directions of travel would be specified relative to the impact resistance of a particular area in question.

2. Orient Use Boundaries to Resources. The vehicle use designations have been aligned with some habitat boundaries. However, they are at a very large scale. They relate to general plant communities or vegetation/wildlife habitats as opposed to the more specialized habitats suggested here, such as, the north versus the south side of a hill, or the west versus the east side of a canyon, a small spring within the more generalized creosote bush community, or specific habitats of threatened wildlife species.

This precision is in many cases implicit in the vehicle use designation of "special design." It is also implicit in the routing of RV trails or corridors. In these small areas critical habitats are avoided. It may be desirable here to orient specific types of vehicles to specific habitats. Some vehicle use orient naturally to landscape features. Dune buggies venture primarily on sand. In other areas, motorcycles may be more damaging to specific habitats than four-wheel drives. In other instances, the four-wheel drives may be most damaging. An attempt should be made to correlate both the intensity and type of vehicle use with resource characteristics.

3. Enforcing and Communicating the Program Elements. The patrol or directing of RV users in order to protect resources as well as other uses is a gigantic task. Adequate staffing of rangers and resource specialists is necessary to accomplish resource protection. Some enforcement may be carried out cooperatively with other federal, county, or local agencies.

It is assumed that many RV users, once aware of the program will abide by it. The catch here is of course, "awareness." The several million RV users

must be made aware of the provisions of the program and be convinced it is in their best interest. A dialogue with the public must also be established to determine when significant disagreement about the program should result in a change.

The greatest awareness of the implications of the program will be achieved if the RV users will aid BLM in defining on-the-ground specifics of various program elements. Procedures will be needed under which users and BLM officials will share in the design of specific race courses, delineating certain hazards, or fencing certain fragile resources.

In addition to communicating the elements of the program, interpreting the fascinating desert resource features and interrelationships may help to build an environmental ethic within the RV user. Such an ethic can lead to the protection of resources. The recreationist will not destroy something he understands and appreciates. He may also exert strong protective peer pressure on others who are unaware of the value and interest of desert features.

4. Reconstruction or Rehabilitation of Resources. Overused motorcycle or four-wheel drive trails could be plowed or graded. After some trails are run by many RV's they become rutted or very bumpy. At that point, users will abandon the trail by either going to another area or by simply moving over to the side of the trail and create a new trail. Either way the number of acres impacted increases. Whether plowing an overused trail would be psychologically accepted by the recreation vehicle user is unknown.

Other physical reconstruction or rehabilitation measures might include planting vegetation, restocking game, watering, fertilizing, stabilizing slopes, or creating wind breaks. Attempts at such rehabilitation so far has met with only limited success. Much experimentation is required before large scale rehabilitation would be advisable.

If archeological sites are in danger of destruction from vehicle use, they could be salvaged by professional archeologists.

5. Intensive Management to Modify or Enhance the Quality of Recreation Vehicle Experiences. More detailed analysis may reveal that opening up certain low value resource areas to vehicle use might channel the use away from higher value areas. In addition, if these areas opened up are close enough to metropolitan centers, travel time will be reduced thus reducing impact on highways and energy usage.

The problems of user conflicts will become increasingly acute if the growth in numbers of vehicles continue. Every use should be designed, in terms of access and facilities, to attract certain uses and repel others. Each use, whether it be dune buggies or motorcycle racing or four-wheel drive rallies, dictates a certain access and resource condition.

6. Coordination With Other Agencies. A system of constant coordination with other agencies is necessary to mitigate one agency's impact on another.

For instance, California Division of Highways sets a carrying capacity, measured in number of cars handled at a certain speed, for each of their highways. Any attraction created or endorsed by the Bureau of Land Management near a highway that was reaching capacity could have an impact on the highway system as well as the secondary impact of perhaps creating more highways on the landscape. If highway capacity was continually monitored, mitigating measures could be taken early enough to prolong the use of the highway by lowering the speed limit and thus increasing the capacity while decreasing air pollution and energy usage.

Other coordination is necessary to determine how uses allowed on national resource land impact uses on adjacent agencies' land. Such agencies of concern include various military areas as well as national monuments and state parks.

7. Research. As mentioned throughout this report all the decisions are based on the best available information. Without doubt there are many voids. In order to make better decisions or to confirm our present suspicions a vigorous program of research is needed.

One form of research is ecosystem monitoring. Permanent photo points and resource transects should be established in each of the vegetation/wildlife habitats and in each of the soil associations. These monitoring points would supply us with more adequate information upon which to base predictions of the degree and rate of ecosystem change.

Social systems monitoring is another desirable research area. Changes in user interest, effects of economic changes, changes in desires for privacy or solitude or socializing activities, and establishment rate of a desert environmental ethic in the various user groups are but a few of the topics requiring further understanding.

Some key topics upon which further research is recommended include:

a. Soils

(1) What is the wind erosion potential of different soils and land forms? Do RV's increase soil loss due to disturbance of surface conditions?

(2) What is the water erosion potential of different soil and land forms? Do RV's increase such run-off due to their disturbance of stable surface conditions?

(3) How can damaged desert pavement, cemented soil surface lair, and other unique desert features be reconstructed by the land managers? How much time is needed for these unique desert features to repair themselves?

(4) Which soils are susceptible to RV compaction damage? And what is the length of time necessary for specific soil types to naturally rehabilitate?

must be made aware of the provisions of the program and be convinced it is in their best interest. A dialogue with the public must also be established to determine when significant disagreement about the program should result in a change.

The greatest awareness of the implications of the program will be achieved if the RV users will aid BLM in defining on-the-ground specifics of various program elements. Procedures will be needed under which users and BLM officials will share in the design of specific race courses, delineating certain hazards, or fencing certain fragile resources.

In addition to communicating the elements of the program, interpreting the fascinating desert resource features and interrelationships may help to build an environmental ethic within the RV user. Such an ethic can lead to the protection of resources. The recreationist will not destroy something he understands and appreciates. He may also exert strong protective peer pressure on others who are unaware of the value and interest of desert features.

4. Reconstruction or Rehabilitation of Resources. Overused motorcycle or four-wheel drive trails could be plowed or graded. After some trails are run by many RV's they become rutted or very bumpy. At that point, users will abandon the trail by either going to another area or by simply moving over to the side of the trail and create a new trail. Either way the number of acres impacted increases. Whether plowing an overused trail would be psychologically accepted by the recreation vehicle user is unknown.

Other physical reconstruction or rehabilitation measures might include planting vegetation, restocking game, watering, fertilizing, stabilizing slopes, or creating wind breaks. Attempts at such rehabilitation so far has met with only limited success. Much experimentation is required before large scale rehabilitation would be advisable.

If archeological sites are in danger of destruction from vehicle use, they could be salvaged by professional archeologists.

5. Intensive Management to Modify or Enhance the Quality of Recreation Vehicle Experiences. More detailed analysis may reveal that opening up certain low value resource areas to vehicle use might channel the use away from higher value areas. In addition, if these areas opened up are close enough to metropolitan centers, travel time will be reduced thus reducing impact on highways and energy usage.

The problems of user conflicts will become increasingly acute if the growth in numbers of vehicles continue. Every use should be designed, in terms of access and facilities, to attract certain uses and repel others. Each use, whether it be dune buggies or motorcycle racing or four-wheel drive rallies, dictates a certain access and resource condition.

6. Coordination With Other Agencies. A system of constant coordination with other agencies is necessary to mitigate one agency's impact on another.

For instance, California Division of Highways sets a carrying capacity, measured in number of cars handled at a certain speed, for each of their highways. Any attraction created or endorsed by the Bureau of Land Management near a highway that was reaching capacity could have an impact on the highway system as well as the secondary impact of perhaps creating more highways on the landscape. If highway capacity was continually monitored, mitigating measures could be taken early enough to prolong the use of the highway by lowering the speed limit and thus increasing the capacity while decreasing air pollution and energy usage.

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(3) How can damaged desert pavement, cemented soil surface lair, and other unique desert features be reconstructed by the land managers? How much time is needed for these unique desert features to repair themselves?

(4) Which soils are susceptible to RV compaction damage? And what is the length of time necessary for specific soil types to naturally rehabilitate?

(5) What is the potential impact of RV's on soil chemical composition of different soil and land forms?

(6) What is the potential RV impact on plant nutrient availability of soils?

(7) During what season of the year are soils most susceptible to damage by RV's? Are soils more susceptible to RV damage when they are saturated with moisture?

b. Geology

(1) Which significant geologic features of land forms could potentially become extinct or irreversibly altered by RV use? Which of these significant geologic features such as desert playas, old shorelines, sand dunes, or pinnacles, are most vulnerable to RV impact?

(2) What length of time is necessary for minor RV alterations of geologic features to heal naturally?

c. Air Quality

(1) What air pollutants are directly attributable to specific types of RV's?

(2) What quantities and types of pollutants are produced on heavy RV use weekends?

(3) For how long and at what levels do pollutants remain near the scene of RV activity under different weather patterns and conditions?

(4) Are certain air sheds potentially more pollutable by RV's than others? If so, does dust on specific areas potentially influence highways or desert communities?

d. Water

(1) To what extent do RV's alter the soil water holding capacity? How does water abundance in different soil layers differ by soil associations and land forms?

(2) Do RV's potentially pollute ground water supplies by emitting various hydrocarbons and leaking various petroleum products?

(3) Do a significant number of RV enthusiasts indiscriminately leave fecal material in the desert and thus constitute a biological contanimation of ground water or springs?

e. Vegetation

(1) What level of RV use can be sustained before revegetation by ephemeral plants cannot take place within one above average rain year?

(2) What level of RV use can be sustained before revegetation by perennial plants cannot occur?

(3) What is the indirect RV damage to vegetation from deposition of wind blown materials?

(4) Does compaction of the soils in open spaces between perrenial plants affect their vigor?

(5) Does compaction of the open spaces between perennial plants affect their reproduction success?

(6) Does engine exhaust affect vegetative vigor for reproduction?

(7) Can dust affect plant vigor or reproduction success?

(8) Does RV use increase or decrease the diversity of plant species?

(9) Are some plant species under greater water stress because of nearby RV use? If so, at what time of the year might this stress be most severe?

(10) Are some plant species more prone to physical destruction than others?

(11) Do RV impacts encourage "exotic" plants that might crowd out native vegetation?

(12) Do RV impacts alter the "normal" age class distribution of desert trees and shrubs?

f. Wildlife

(1) Which wildlife species are affected first by a reduction in vegetation communities by RV use?

(2) Does RV noise affect breathing, rearing of young, the daily life cycle, or use pattern of a habitat area for certain species?

(3) Does RV noise damage the energy relationships of nocturnal animals?

(4) Can continued RV noise lower the ability of wildlife species to hear normally?

(5) What are the effects of dust, vehicle exhaust, and accompanying air quality deterioration on food and habitat for certain wildlife species?

(6) What direct effect does RV caused air pollution have on plant and animal survival and reproduction?

(7) Does RV caused air pollution affect wildlife plant palatability?

(8) Does RV deterioration of air quality have a direct effect on wildlife by lowering the sense of smell and increasing the susceptibility to diseases by causing a general decrease in physical condition?

(9) What are the abilities of various species to adapt to changes in habitat conditions caused by disturbance of RV's? What are the tolerance levels of various RV impacts?

g. Ecological Interrelationships

(1) What long-range effects do RV's have on the balance of the desert ecosystem as a whole?

(2) Which environmental components are most damaged by RV use? How can these impacts be minimized?

(3) What vegetation/wildlife habitats are most susceptible to recreation vehicle damage?

(4) What is the direct or indirect RV imapct on the various energy and nutrient cycles of the desert?

(5) What is the effect of RV impact on successional patterns and overall productivity of each desert plant community?

h. Noise

(1) At what decibel level is RV noise damaging to humans?

(2) What topographical features or race course designs might amplify or deaden the sound of RV's?

(3) How wide a buffer strip is necessary around desert communities to separate them from the normal sounds of RV's?

i. Recreational Values

(1) What effects do RV's have on desert recreationists physiological and social needs and desires?

(2) How do RV uses influence the experience and behavioral patterns of the non-recreation vehicle desert user?

(3) To what extent are persons of varied recreational activities aware of the conflicts between various recreation groups? To what extent are they willing to be zoned into specialized recreation use areas?

(4) To what extent is desert use of RV's a potentially passing fad?

V. ANY ADVERSE AFFECTS THAT CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

The program is aimed at controlling the spread of damage to resources throughout the desert. The program concepts will not eliminate or substantially reduce the number of Vehicle User days in the total study area. It will however confine this use to selected areas.

Those who desire to tour throughout the desert for general recreation will be confined to existing or designated roads and trails. The present inventory of existing roads and trails (estimated 12,000 miles) provides such an extensive choice for this recreation that it is doubtful there will be a measurable concentrating affect on the present road and trail system. However if a slight concentration does occur in certain areas adverse effect on resources in that area would result.

Those who desire to travel cross country will be confined to the open areas (approximately 6% of the Study Area). Many of the open areas were selected because they presently are popular areas receiving concentrated use. Additional areas were provided to accommodate the increased growth in demand for cross country travel. It can be expected that resource damage will confine to occur in these areas and the extent of such damage may be severe due to the confining effect of the program.

The unavoidable adverse impact on specific areas from continued RV use is identified in Section III. There, the potential high, medium or low RV impact is shown for each resource.

It should be emphasized that much of this environmental analysis record addresses simply the potential of the vehicle use designations to dictate a particular type of use. Precise methods of implementing this program are not detailed. The discussion of some possible implementation measures is contained in Section IV.

VI. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE ENHANCEMENT OF LONG-TERM PRODUCTIVITY

"Short-term" and "long-term" do not refer to fixed periods of time, but rather must be determined for each case. Short-term can be thought of as that time when a substantive part of the action takes place and long term as that time in which subsequent effects of the action will still impact the environment. (Figure 41.)

A. NON-RENEWABLE RESOURCES

When non-renewable resources are impacted the short and long-term effects are essentially the same. If minerals are remvoved and transported away from the site they will obviously not regenerate. If archaeological and paleontological resources are destroyed they will likewise not regenerate. This is true too for historical evidence. Whether soils are considered non-renewable depends on the assumed time referent. Soils will rebuild but the process may take thousands of years. The removal of soil from one point by wind or water erosion may cause it to be deposited on another site. The recipient site may be increased in soil quality while the donor site would suffer a long-term negative impact. Loss of soil from any one point is a long-term negative impact. Even a quarter inch or half inch loss of soil may not rebuild within 20 years or even possibly 100 years.

B. RENEWABLE RESOURCES

Many renewable resources will recover quickly from short-term negative impacts. Such renewable resources may include vegetation, wildlife and social experiences that are obtained from specific sites. For instance, if a plant is removed but the soil is not removed or lowered in productivity the plants may regenerate as soon as the moisture is adequate. But even here the process of regeneration may take several years before the required moisture is available.

C. IMPACTS ON THREATENED WILDLIFE

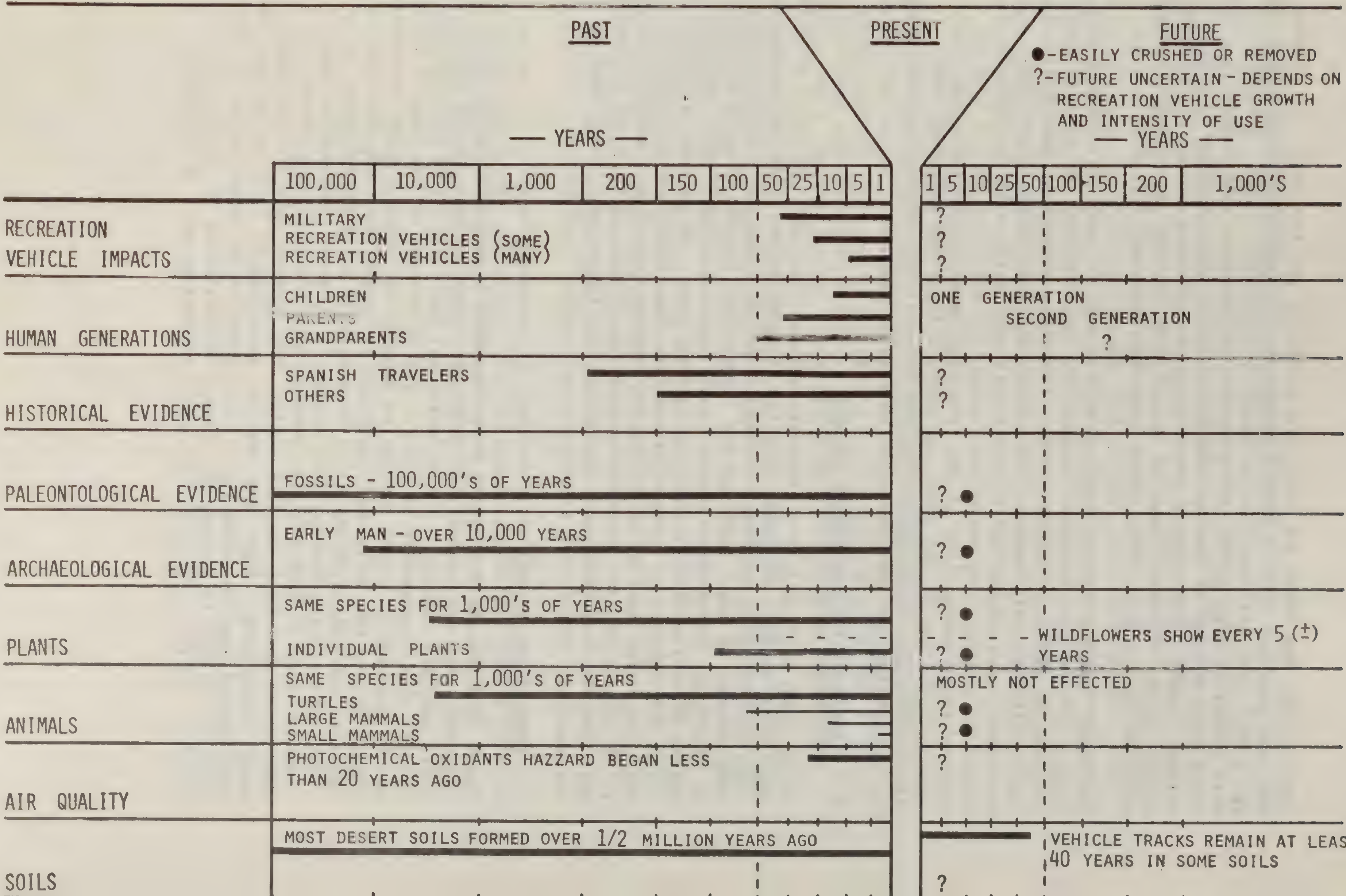
Impacts on threatened wildlife may accelerate their extinction. If the total number of individuals of a certain species is very low further reduction may complicate reproduction. Even though a few animals may be remaining, they may be under stress. Thus, reduction of mating capacity may become impaired. It would then be only a matter of time before the species became extinct.

D. DURATION OF IMPACTS

Current conditions and future changes in vehicle use designations and area boundaries may impact both renewable and non-renewable impacts. The opportunities for preservation or re-establishment of resources and recreational experiences is greatest under the "closed" vehicle use designation. The environmental costs of vehicle use designations of "open" to "existing roads and trails" and "designated roads and trails" are decreasingly less. If an area is closed that had already been effectively closed because of physical barriers that actually prohibited

RELATIVE ANTIQUITY OF DESERT FEATURES

FIGURE 41: PROCESSES AND INFLUENCES



vehicle use, the short and long-term potential are the same. If an area that had previous vehicle use is closed it is possible that the plant life and animal life will be given a chance for recovery. Thus, a holding in this classification would have a beneficial impact on the resources. This might also be true of the designated roads and trails category as this category would allow certain areas to at least have a chance of recovery. In the latter instance it may be argued that recovery on an existing road returned to a closed status might take more than our life time.

The "open" vehicle use designation will result in negative resource impacts. If the soil has been irreversibly impacted and the vehicle users continue to run over the same areas, long-term effects or potential will not be altered. If, however, the recreation user likes to run over previously undisturbed soils within this area soils will decrease in potential quality. Decreased soil potential will also result in a decreased vigor and quality of the resources depending on soil. If in an open area, or any of the other use designations, the resources are diminished then future experiences or recreational activities that depend on those resources would be opportunities foregone.

E. REGULATORY FACTORS VERSUS IMPACTS

It is often difficult to distinguish between long-term naturally evolving regulatory factors and human impacts. Decreasing wildlife and vegetation vigor and stocking may have resulted from increasing aridity rather than some actions of man. Hastings and Turner (1971) state that it is difficult to detect an increasingly drying condition in the desert that has been taking place for perhaps the last hundred years. It is most difficult to infer that impacts of recreation vehicles contribute a certain percent impact and that aridity or increasing aridity contributes another percent. It is interesting to speculate that if the climate is becoming increasingly arid then short-term impacts now and in the future may likely have an increasingly longer term effect.

F. CUMULATIVE IMPACTS

Short-term impacts considered minor may when accumulated become quite important when measured in the long term. For instance in the Los Angeles Basin everyone considers their individual contribution to smog through driving their automobile as minor. Yet 75 percent of the smog is produced by the automobile. Such cumulative impacts can cause a major environmental impact before the individual parts can be controlled. How many recreation vehicles can pass over the soils of a certain point before there is irretrievable loss? Perhaps this follows a curve of diminishing impacts. That is, four or five vehicles passing over the point may compact a particular soil to a two foot depth. One hundred vehicles may impact it very little more. Then five vehicles traveling at 10 miles an hour faster may compact down to three feet. That vehicles do impact soils is obvious. What is unclear is whether the damage is continuing or whether it has limits. In this case speculation and estimation must be our guide.

G. RECREATIONIST MAY BE THEIR OWN WORST ENEMY

The experience of solitude and of enjoyment in viewing unique examples of nature in a closed area might depend on a lack of noise and visual intrusions. The act of designating the area unique on the map calls attention to it. So perhaps use of such areas will increase as a result of the plan. In fact, use may increase to the point that people seeking this unique experience will impact each others experience by their very presence. In this case it is a question of how many people are too many. At other levels it is a question of how many vehicles are too many. It may be that the designated roads and trails areas would cause less long-term impact than the "closed" areas by simply not calling attention to unique values.

H. RV GROWTH - INDIRECT IMPACTS

RV desert use and purchases of RV's will either increase, decrease or remain the same as present. It is entirely possible that increases in vehicle use off the road in the desert may become a passing fad if the majority of the desert RV users are seeking solitude. If the desert is crowded to a certain density the solitude may no longer be obtainable.

Assume for the sake of discussion that increase in RV sales would drop or would reach a plateau. If this happened then long-term environmental impacts will be slight to decreasing. On the other hand RV numbers and use may increase. At the present time it is estimated that RV use is increasing at a rate of 7 to 9 percent per year. At this rate the number of vehicles and use will double in 8 or 10 years. Even if the use only increased at the rate of 5 percent per year the total number of vehicles would double in 12 years. If we assume that there are about 8,000,000 RV visitor use days per year now that means that the future environmental impacts will indeed be of higher magnitude.

Of course still other unforeseen or unpredictable events could cause a rapid decline in the use of RV. For instance, unavailability of gasoline or rationing or a highly increased cost of gasoline might cause RV use to be discontinued or at least temporarily haulted.

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The irreversible and irretrievable commitments of resources are described under Section VI. They are the impacts described as "long-term."

Whether RV impacts are irreversible or irretrievable depends on the assumed time referent. It is apparent that some impacts would not be reversed for 50 or 100 years. In geologic time the soils will probably repair and geologic features will naturally be formed and reformed. Of course, historical, archaeological and paleontological resources cannot be replaced or restored once they are damaged or obliterated. This is likewise true of wildlife or vegetation that has been forced into extinction.

Many changes in ecosystems may naturally be irreversible. That is, as evolution continually occurs some species, because of increasing aridity or some other factor will become extinct. In such an instance the effect of RV's could only be to accellerate the natural evolution. It is impossible at this time to specifically identify the irreversible effects of RV's on vegetation or wildlife.

VIII. PERSONS, GROUPS, AND GOVERNMENT AGENCIES CONSULTED

Thousands of individuals were contacted in formulation of the program. The information gathered for the program was also used in this Environmental Analysis Record.

A. OPEN HOUSE MEETINGS

The first "open house" meetings held in May 1973 gathered general data on valuable resources and popular RV use areas. Resource and RV use maps were shown so the public could identify and help fill any information voids. The open houses were held in the following California cities:

Baker	Bakersfield
Barstow	Bishop
Blythe	Imperial
Indio	Lancaster
Lucerne Valley	Needles
Ridgecrest	Riverside

A total of 770 people attended these sessions. Of these, 670 people gave some written comments.

B. INTERVIEWS

Another source of information was interviews of academic desert experts. Three hundred thirteen professors and researchers of universities, colleges, and junior colleges throughout California and also in Arizona, Utah, and Nevada were visited and interviewed.

C. DISSEMINATION

The Draft Plan was disseminated in September 1973 by news release, mailings, "trailer" open houses, and briefings.

1. Seventy thousand copies of the draft plan were distributed. As a result of this 18,000 responses were received. The public was given 30 days prior to October 16, 1973 in which to submit comments.

2. "Trailer" open houses were located in 17 cities. The Draft Plan as well as the key resource value summaries, a large-scale relief map of the Draft Plan, and individual area, specialized environmental analysis check lists were available for public review and comment. The trailer location cities included:

Bakersfield	Barstow
Bishop	Blythe
Canoga Park	El Centro
Escondido	Indio
La Mirada	Lancaster
Orange	Ridgecrest
Riverside (Raceway)	San Bernardino
San Diego	Victorville
Yucca Valley	

3. Several groups and agencies were invited to send representatives to briefing sessions in which BLM personnel presented the Draft Plan and were available to answer questions and receive comments. The briefings, held in September 1973, lasted from 1 to 3 hours. They were held morning, afternoon and evening hours over a period of 9 days. The following groups and agencies were invited:

a. Citizen and User Groups

California Off-Road Vehicle Association
California Association of 4-Wheel Drive Clubs, Inc.
American Motorcycle Association Districts 36, 37 and 38
California Federation of Mineralogical Societies
Western Rockhound Association
California Outdoor Recreation League
Sierra Club
Nature Conservancy
Desert Protective Council
Desert Beautiful
Isaac Walton League
National Audobon Society
Wilderness Society
California Wildlife Federation
Archaeological Societies

b. Federal Agencies

Departments of: Transportation, Defense, Agriculture, Housing & Urban Development, and Commerce; Health, Education & Welfare; and the following specific Bureaus and Agencies: Agricultural Research Service, Agricultural Stabilization Conservation Service, Bureau of Indian Affairs, Bureau of Reclamation, Bureau of Outdoor Recreation, Bureau of Sport Fisheries & Wildlife, Bureau of Mines, Corps of Engineers, Customs Agency Service, Environmental Protection Agency, Forest Service, Farmers Home Administration, National Park Service, Regional Solicitor, U.S. Geological Survey, and Soil Conservation Service.

c. State Agencies

Departments of: Conservation, Public Health Services, Parks and Recreation, Fish & Game, Agriculture & Public Works; Water Resources Control Board, Air Resources Board, Office of Planning, State Lands Commission, Regents of the University of California, California Advisory Committee on Western States Water Planning; Wildlife Conservation Board, Division of Mines and Geology; State Department of Education and State Department of Motor Vehicles.

d. Local Agencies

Board of Supervisors, Departments and Special Districts of San Diego County, Riverside County, Imperial County, San Bernardino County, Los Angeles County, Kern County and Inyo County. Mayors, Councilmen and Departments of the following cities: Barstow, Needles, Adelanto, Victorville, Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, Westmorland, Palmdale, Banning, Beaumont, Blythe, Coachella, Desert Hot Springs, Indian Wells, Indio, Palm Springs, California City and Ridgecrest. Southern California Association of Governments, San Diego Council of Governments, Mountain and Desert Planning Agency, California Nevada Development Organizations, Regional Anti-pollution Authority of Coachella Valley, Kern County Council of Governments.

e. Institutions

Museums (public and private), Educational Institutions (public and private).

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This section includes both "bibliography" and a "literature citation". It refers to both literature cited in respective headings in the "description of the existing environment" and in other narrative and literature that was examined but not cited.

The bibliography is arranged by categories. Duplicate entries were made when specific entries overlap two or more categories. The categories include:

1. Soils
2. Geology
3. Air Quality
4. Vegetation and Vegetation/Wildlife Habitats
5. Wildlife
6. Ecological Interrelations
7. History
8. Archaeology
9. Paleontology
10. Outdoor Recreation Vehicles

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